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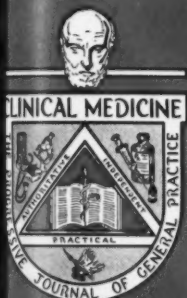
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VOLUME 52

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Syncope of Cardiac Origin

By GEORGE E. MOUNTAIN, M.D., Des Moines, Iowa

SYNCOPE of cardiac origin is one of the difficult emergencies that frequently confronts the physician. He is expected to determine not only if the case is serious, but also the possible etiology of this reaction. In discussing the diagnosis of cardiac phenomena resulting in unconsciousness, I purposefully have omitted certain vascular problems such as cerebral-vascular accidents and benign syncope. Likewise no attempt is made to cover the management or treatment of the subject under discussion.

Heart Block

One of the most interesting types of cardiac syncope is that due to complete heart block. These attacks are due to the ventricles slowing to a complete cardiac standstill or at least to the critical point where there is an inadequate cerebral circulation. This condition is usually due either to rheumatic or diphtheritic infections, digitalis intoxication, or to chronic heart disease. In the latter condition, complete block is usually permanent once it is established.

Syncope usually does not occur until the heart rate goes below 30 beats per minute. The patient may merely feel lightheaded or may become completely unconscious and even convulsive with stertorous breathing. I followed one patient who would become unconscious for several minutes with a heart rate of 26.

Some have a ventricular standstill of several seconds before becoming unconscious. The danger from this condition is not the slow rate of 20 to 30 beats per minute, but the tendency for a failure of the idioventricular pacemaker to send out impulses.

The clinical recognition of syncope due to complete heart block is usually simple if one finds a very slow regular rate. Additional evidence is to see extra-auricular waves in the jugular pulse or possibly to hear extra-auricular sounds over the precordium during the long pauses. The electrocardiogram, if available, completes the diagnosis.

Paroxysmal Fibrillation

Syncope is occasionally associated with attacks of paroxysmal fibrillation, although the exact mechanism is unknown. Comeau feels that it might be the result of a vagotonic effect upon the heart producing a sino-auricular block, the syncope being due to a cardiac standstill during the interval between the sino-auricular block and the subsequent fibrillation. This is a plausible explanation as it has been shown in dogs that stimulation of the vagus can induce auricular fibrillation and that auricular fibrillation is not infrequently preceded by a short period of heart block. This mechanism must always be considered in patients who have fainted and who are fibrillating soon afterwards.

Ventricular Fibrillation

Ventricular fibrillation can produce spells of unconsciousness. The mechanism of this phenomenon is probably due to a temporary cerebral anoxia resulting from failure of the ventricles to maintain an adequate cardiac output. A few cases have been reported in which ventricular fibrillation recurred spontaneously and was associated with fainting. Dock reports such a case in which the rhythm, with its associated faintness, was reproduced by intravenous epinephrine during which electrocardiographic recordings were obtained. The spontaneous episodes were controlled by quinidine sulphate. Ventricular fibrillation sometimes occurs following a coronary occlusion period. Definite proof is possible if electrocardiograms are taken during these periods.

Acute Coronary Occlusion

Periods of syncope sometimes occur during acute coronary occlusions. Although these accidents often are attended by peripheral vascular collapse and shock, usually the syncope is due to either an inability of the involved myocardium to fulfill its function, or to one of several types of rhythms, such as ventricular fibrillation, complete heart block, or marked sinus bradycardia. According to Cookson's series of cases, syncope was associated with various rhythms including sinus bradycardia and complete heart block. Cardiac standstill was not noted in any of his cases.

Interesting from a prognostic view, all of his cases with syncope or complete heart block died in a relatively short time. Again the electrocardiogram is invaluable in not only determining whether the syncope is associated with an occlusion, but also to help differentiate the type of prevailing rhythm as ventricular from auricular fibrillation, and sinus bradycardia from complete heart block.

Aortic Stenosis

Aortic stenosis is the only valvular heart condition in which syncope occurs with any frequency. This reaction has been linked by some to a hyperactive carotid sinus. However, in most cases of aortic stenoses studied, the carotid sinus has been of normal sensitivity. Syncope in these cases usually occurs during periods of great exertion. When fainting occurs, the stenotic condition is usually far enough advanced to give some of the typical findings, such as a systolic thrill over the base of the heart, a

rough systolic murmur which is heard best in the aortic area and is transmitted to the neck vessels, and the faintness or complete absence of the second aortic sound.

Hyperactive Carotid Sinus

Much attention has been given in the past decade to the study of the hyperactive carotid sinus. In some individuals, pressure upon this body produces either a lightheaded sensation or unconsciousness. Weiss and his co-workers have demonstrated three distinct types of carotid sinus reflexes. In one which he calls the vagal type, the cardiac symptoms are caused by efferent impulses which utilize the vagus pathways, producing a temporary suppression of the sino-auricular node. There is also a refractory period during which the heart does not initiate impulses from new areas. This period of asystole produces cerebral anoxia and fainting.

In the second type, neither the heart rate nor the blood pressure is affected and there is a normal blood flow through the brain during the unconscious period. As in the first type, the afferent impulses arise in the carotid sinus and pass to the medulla from where efferent impulses travel to the hypothalamus or to the blood vessels which supply this area.

In the third and least common type, the impulses arise from the carotid sinus and the efferent impulses act on the small blood vessels, producing a vaso-dilatation and a secondary fall in blood pressure. Again unconsciousness is due to a diminished blood flow to the brain.

The diagnosis of a hyperactive carotid sinus is confirmed by producing faintness or unconsciousness by massaging or compressing the carotid sinus for a few seconds. If giving atropine previously prevents the syncope, one is dealing with the first or vagal type. If atropine is ineffective, but epinephrine aborts an attack by causing vaso-constriction, it is the third or depressor type of carotid sinus syndrome. If neither drug is effective, it is most likely the cerebral type. Injecting the carotid sinus with procaine makes any local stimulus ineffective.

Other cardiac conditions which have been known to produce syncope are severe sinus arrhythmia during the phase of bradycardia, a ball-valve thrombus in the left auricle, and cardiac tamponade.

It is obvious that in this brief article

it is impossible to go into much detail regarding the many theories relating to the physiology of the problems under discussion. It was attempted only to present the more logical aspects of the problem and the most direct methods of diagnosing the situation as it confronts the physician.

Equitable Building

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Notes from the International Postgraduate Medical Assembly

Reported by RALPH H. GORRELL, M.D., *Trinidad, Colorado*

THE 1944 International Assembly of the Interstate Postgraduate Medical Assembly of North America was held at the Palmer House, in Chicago, October 17 to 20. The attendance was well over the 3000 mark and as usual the excellent program, the fine scientific and commercial exhibits more than satisfied the physicians who were obviously intent on gaining knowledge.

Here follow abstracts of a few of the many practical papers presented at the meeting.

Psychosomatic Aspects of Problem Cases in the Practice of Medicine

By EDWARD WEISS, M.D.

Professor of Clinical Medicine, Temple University School of Medicine, Philadelphia, Pa.

Psychosomatic is a new term but it represents an approach to medicine as old as the art of healing itself. It is not another specialty; it is an approach which applies to all aspects of medicine and surgery. It is founded on the important advances in physical medicine as well as the important advances in psychological medicine. In any illness or

disease, the emotional factor must be studied.

Most of our patients can be separated into three groups; a very small number who are obviously psychotic; a larger number who have a definite physical illness of non-psychogenic origin; and a large group who are ill but have no physical disease to account for their illness.

A neurotic patient with a normal heart may suffer pain, but the neurotic patient who has organic heart disease adds an additional burden to the work of the heart. Study the patient carefully, physically and psychologically, for the mind and body are one, they demand separate techniques of investigation.

Illness Caused by the Physician: If a patient comes to you thinking he has heart trouble and you know that he does not, tell the patient so but do not add suspicion by suggesting he take it easy and rest, and do not keep repeating the examination of the heart every time he calls. Satisfy yourself and stop testing.

Sometimes a physician becomes the "pathogenic agent" in fixing the neurosis. Some doctors will not concede the absence of disease and believe that there

must always be some physical basis for the illness. Some admit the emotional factor but believe that it is probably secondary. They even make the remark that the patient doesn't look neurotic, just as though it were something that would show on the surface. Many women have cancerphobia. They have discomfort, or imagine a swelling and think they have cancer. In some, you cannot erase this fear, but the milder states can be corrected if properly handled.

Organ Language: If a patient is having trouble emotionally, and he cannot express himself in word or action the body will find a means of expression. If a patient can't swallow, it may mean the patient can't swallow something in his life situation. If a patient can't breathe properly, it may mean, literally, that he has a load on his chest. Loss of appetite may mean the patient is emotionally starved. Emotional tension often gives rise to muscle tension. Sometimes a patient may have a peculiar ache in his arm, a typical neuralgia, this may mean he has a desire to strike someone, but is prevented from doing so by mingled feelings of respect and hostility. The gastrointestinal tract is often the pathway of the emotion.

I would like to say a word about vitamins and endocrines which are so highly exploited. Vitamins are all right in their place as are endocrines but the average layman is beginning to think all he has to do is swallow a magic pill and every thing will be all right. You cannot treat emotional illness with vitamins and endocrines.

The Patient Who Wants an Operation: A young woman at the age of 19 had her first attack of pain in the right lower quadrant. At 20, the appendix was removed. Six months later she had a pelvic operation because of painful menstruation. At 26 years, she had her third operation for abdominal adhesions. For the next four years she complained a great deal, and had been in bed for considerable periods. Finally, after a great deal of hospital investigation, a fourth operation was performed in the belief that there was disease of the large bowel but all organs were found normal.

Here, then was a patient who had been incapacitated for many years and who during this period of time had been repeatedly subjected to searching physical investigations and many abdominal operations. What the many physicians attending her had not discovered, or did not know the significance of, was that this

long illness began shortly after the fourth of her five sisters married and this patient thought that she would in all likelihood remain a spinster and would then endure a life of drudgery and comparative loneliness. Meek and submissive, unattractive and unintelligent, she unconsciously turned to illness when she found it impossible to compete with her sister's superiority. Further personality studies disclosed her very immature emotional development and confirmed the opinion that the sister's marriage had precipitated an invalid reaction in this psychoneurotic individual.

The question of psychological preparation for surgery is one of the major problems in medicine. Surgeons are always so careful to prepare their patients physically for surgery (they would never think of performing a major operation without knowing that the cardiovascular-renal system had been surveyed) but they rarely give any consideration to the kind of personality that exists in the individual who is about to be operated upon; how much anxiety is there, and what the effects of a surgical traumatic experience may be as far as the personality structure is concerned.

Diabetes Today

By ELLIOTT P. JOSLIN, M.D.

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George F. Baker Clinic*

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Boston, Massachusetts*

A new and interesting discovery in this field today has been Alloxan, a chemical which, when injected into rabbits, will induce diabetes within 24 hours.

The Diabetes produced is typical of the diabetes in man. Alloxan injection is followed by brief hyperglycemia. Later by severe hypoglycemia with hypoglycemic convulsion. This can be controlled with insulin. Diabetic coma develops when insulin is withheld.

Alloxan attacks the center of the diabetic problem in a selective necrosis of the islets of langerhans without damage to the other tissues, if appropriate dosage is used. Changes can be seen within five minutes.

Many people believe that we have more diabetics than we used to have and cannot understand it. The first reason for this, is that people with diabetes are now living longer because of adequate treatment. In other words where in 1936 we

had 100 diabetic patients to treat, we now have 137, practically 40% more. A second reason for the apparently greater number of diabetics today is that more are discovered. This was disclosed by the results of the selective service studies.

There is great urgency for early treatment. One must get to the disability in time to treat it by definite methods. This is especially desirable in diabetic coma because according to the author's report the mortality of cases treated very aggressively in the first three hours of coma did nearly ten times as well as those when the same amount of insulin was spread over twelve hours.

Diet is important in diabetes. If one divides the 150 grams of carbohydrate into thirds, one third would be made up of a slice of bread three times a day, a second third by an orange or its equivalent in fruit three times a day, and the remaining third by four large saucers of 5% vegetables, containing 20 grams of carbohydrate, approximately, half pint of milk and cream containing 10 grams, and a half portion of oatmeal and 2 Unedas or graham crackers. For the protein in the diet, that varies with the age of the patient and the fat is regulated by the weight of the patient. Additions or subtractions to this total diet are easy.

The treatment with insulin should be simple and sane. To make it simple and sane, we should have one kind of quick insulin and one kind of slowly acting insulin. There is no guess work in diabetes, it is laboratory work.

Funds are required to carry on the work and scientific study of diabetes, but what funds do we have? Have you ever thought of it? There are just as many people with diabetes as there are people with tuberculosis. Yet there is just one small national diabetic society, and just four or five diabetic societies in our United States. In contrast think of the many splendid tuberculosis societies there are for every state and nearly every county. There are approximately four times as many diabetics in the country as there are crippled cases of poliomyelitis for whom over ten millions of dollars were raised in 1944.

I think that into every hospital where we go, we should try to start a fund for the promotion of better laboratory facilities and better all around treatment for diabetics. It is far more preferable to get \$1.00 from 1,000 diabetic patients than \$1,000.00 from one diabetic because when

you get a dollar from each one, that one will take better care of himself and be a better diabetic. Solicit funds from diabetics and encourage legacies. Our other object should be the stimulation of research and the application of all available knowledge.

Diseases Commonly Confused With Acute Coronary Occlusion

By WILLIAM PAUL THOMPSON, M.D.
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Many diseases are readily confused with angina pectoris and acute coronary occlusion. Many of these are benign or self-limited diseases which produce no disability. An erroneous diagnosis of coronary occlusion in this group may easily precipitate a cardiac neurosis which is even more disabling than coronary occlusion itself.

The pain of angina pectoris is induced by effort or emotion, is situated behind the sternum, radiates to the neck or to either arm, begins and subsides gradually, and lasts typically one to three minutes. It is a sensation of pressure, constriction, oppression, and sometimes burning. Frequently it is not severe.

The pain of acute coronary occlusion is similar except that the onset is likely to have no relation to effort. The pain is usually more severe, and it lasts from one-half hour to several hours. Circulatory collapse is common. After an attack of angina pectoris, the patient returns to his previous state of well-being; after coronary occlusion, he is likely to develop fever, a fall in blood pressure, tachycardia, sweat, pallor, leukocytosis, increased sedimentation rate, and electrocardiographic alterations.

Acute pericarditis may produce pain closely resembling that of coronary occlusion. Common differences are an inspiratory increase in pain and radiation to the back. A pericardial friction rub is likely to be present at the onset of pain, while in coronary occlusion its appearance is usually delayed from two to four days. Sweat, pallor, fever, leukocytosis, and increase in sedimentation rate commonly follow. The electrocardiogram is altered in a characteristic way which has a superficial resemblance to myocardial infarction.

Pulmonary embolism usually produces dyspnea, cyanosis, and circulatory collapse as predominant features. The pain may at times resemble that of coronary

occlusion. The electrocardiogram resembles roughly that of posterior myocardial infarction, but the differences are diagnostic. A background of pelvic surgery or obstetrical delivery should direct attention to the possibility of pulmonary embolism.

Patients with anxiety neuroses and the hyperventilation syndrome occasionally have pain resembling that of acute coronary occlusion. Striking electrocardiographic abnormalities may follow. A detailed history will reveal many characteristic symptoms such as dizziness, faintness, weakness, numbness and tingling, palpitation, tremulousness, and muscular rigidity.

Subdeltoid bursitis may be associated with discomfort radiating from the subdeltoid area to the side of the neck, the pectoral region, the scapular area, and down the arm. Limitation of motion of the shoulder is usual.

Cardiac neurosis, neurocirculatory asthenia, dissecting aortic aneurysm, esophageal ulcer or diverticulum, cardiopasm, hiatus hernia, scalenus anticus syndrome, cervical rib, and compression of the sixth cervical intervertebral disc may produce discomfort suggesting the possibility of angina pectoris or coronary occlusion. An adequate history will usually suffice to differentiate them.

It is of great importance for the physician to understand in detail the history of his patient before resorting to laboratory study. Several of the diseased discussed may produce electrocardiographic alterations resembling those of myocardial infarction and lead to an erroneous diagnosis with the production of a disabling cardiac neurosis.

Disability Evaluation

By EARL D. McBRIDE, M.D.

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If the medical profession is to uphold its dignity and honor in court as well as in private offices, the doctor as a witness should know what he is talking about when he speaks for the record of the trial.

Most doctors do not like to give their opinions in court but often times, they must do so. It is natural that there is often a difference in perspective between doctors called upon to give their opinion in respect to a claim which is to be tried in court. These differences should

be honest ones and of scientific deduction. Medical opinion in the settlement of a claim becomes a commodity. There is to be a price placed upon the disability which has occurred to an individual; the doctor's opinion is on the market. Both sides of a case seek medical opinion favorable to them, so we must know what we are talking about. A doctor need have no fear of expressing an opinion if he stays within strict medical knowledge . . . within the clinical scope. Only when you begin to sympathize a little too much . . . step a little to one side . . . feel sorry for the individual . . . that is when you get into trouble.

The only time we are called upon to evaluate a disability is when a claim is attached. Disabilities from causes independent of legal claims seldom come to light. Try to answer the questions as to the man's disability, the same as you would if he were a private patient in your office. . . be honest. Also, try to find out what is behind the claim of disability. Find out what the man could do before he sustained the injury. . . what he can do now. . . what he can't do now that he could do before.

It is not necessary to be too technical. In my opinion, the only reliable basis of measuring disability is that of function. If the person has a disability to his leg, or arm, the question arises as to what he can do with that leg or arm. Is the disability temporary or is it permanent?

There is the matter of rehabilitation also. Perhaps it would be impossible for the injured party to return to his former employment. If the person has been working in industry where he must work with others, the psychology of a crippled person working alongside someone in perfect physical condition is to be considered.

We must try to form some systematic standard basis of reasoning out the question of the evaluation of disability. We have no right to guess. It deserves scientific study.

Compensation and accident insurance companies have set up certain standards and pay a specified amount for the loss of a leg or an arm but the real problem is to figure out just where the individual now fits in. What can he do with the injured member?

Figure out the disability in percentage. Ask yourself what percentage of quickness has been lost, what coordination, how much strength in that particular member has been lost, how secure does

the person feel using the injured limb, how long can he hold up working, what is the increased risk, how much harder is it going to be for him to find employment? These are the important questions which must be answered honestly in order to give a fair evaluation to the disability.

Differential Diagnosis of Lesions of the Kidney

By HERMAN L. KRETSCHMER, M.D.
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Whenever confronted with lesions of the kidney, we must find out what is the type of pathologic lesion.

Some of the different types of renal lesions that are most frequently met with are: stone, tumor, tuberculosis, pyelitis and nephritis.

In the diagnosis of double renal lesions, we find combinations such as: stone and tuberculosis, stone and tumor, polycystic kidneys and stone, stone and tabes dorsalis.

The differential diagnosis of lesions in the abdomen must include appendicitis (acute or chronic). Many patients are operated on for appendicitis when the pathology is in the urinary tract. Only after making a thorough study of the patient, or when a group cannot come to an agreement, is a doctor justified in removing the appendix.

Gallbladder trouble is another condition often confused with kidney trouble.

Duodenal ulcer is another lesion confused with the pathology in the right kidney and here is another place where we must tarry, but give the patient the benefit of the doubt.

Some of the lesions of the gynecologic tract are fibroids, carcinoma, endometriosis and salpingitis. Perform a pelvic examination. They must be differentiated from other retroperitoneal lesions such as tumors and cysts. It is very easy to rule these out by taking an x-ray with a shadowgraph catheter, which practically always shows a change in the course of the ureter.

Of the lesions of the spine, arthritis is the one most frequently met with. Many people who have pain in the back and think they have kidney trouble, have arthritis.

Osteomyelitis is a rare disease and one which has been confusing.

Then there is the problem of the double

lesions such as bilateral stone, bilateral tuberculosis and tumor.

If a patient has stone in the kidney on the right side and stone in the gall bladder, the problem arises as to which lesions predominate and what to do, and which to treat first? It seems to me that if the patient has acute gall bladder disease and acute kidney colic, treat the gallbladder first. Of course, it all depends upon the individual problem presented.

Then there are problems in pregnancy. Pyelitis is one, and one which can be prevented. The prevention of pyelitis begins with the prenatal care. Careful attention should be given to the gastrointestinal tract, to the teeth, tonsils and sinuses. Infected tonsils and teeth must be removed.

Get an accurate history regarding:

- a—renal colic
- b—passage of stones
- c—polycystic history
- d—pain in the back

If you think the patient has stones from the history and urinary examination and the x-ray shows no stone you might bank on the history and urinary findings.

Do a complete physical examination:

- a—palpate the kidney
- b—x-ray
- c—cystoscopy
- d—urinary examination

There are many lesions which are confusing but I believe if we get a complete history and do a good physical examination, we will save ourselves a lot of time and trouble.

Spoiled Children

By BERT I. BEVERLY, M.D.

Assistant Professor of Pediatrics

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Chicago, Illinois

The term "Spoiled Child" usually refers to an aggressive, disobedient, disrespectful youngster, whose behavior is disturbing to adults, and the child knows this to be true. The usual explanation is that the child received too much attention and the commonly prescribed treatment is corporal punishment. As you know, this type of treatment does little good. It is important to understand, therefore, the reasons for the misbehavior of these unhappy children and a brief analysis of a few cases will help.

A nine-year-old boy cried a great deal and threw temper tantrums. In one instance, he threw himself on the sidewalk, kicking and crying, because his

mother wanted to sit in the front seat of the car on the way home from the movies rather than sit in the rear seat of the car with him. The boy was doing poorly in school even though he was of high intelligence. He did not get along with other children because he would not play fairly in games.

This boy was born seven years after the marriage of his parents and was wanted very much. He received all of the attention of his parents, four grandparents and four uncles and aunts, being the only child in the families. He received far more affection than he needed; he was used as an emotional outlet for them all. He was not allowed to do things for himself, being fed, bathed and entertained by all of them.

We have in the above case then an overindulged and over-protected boy, who was not allowed to grow up and do things appropriate to his age. He had remained infantile in his speech and behavior. His parents lost all control over him. He was disliked outside his home; he was unsure, confused, apprehensive, maladjusted and unhappy boy. His emotional needs were not met because of the apprehension of the parents and he did not develop self-confidence because he was not allowed to do things he was able to do. He was a spoiled youngster.

Case 2: A nine-year-old boy who could not be controlled. He fought his younger brother, broke the furniture, stole money, refused to obey, threw temper tantrums and made unreasonable demands, especially in the presence of guests and fought with his associates. He was restless, disturbing at school, and received poor grades in spite of high intelligence.

This boy's mother stated that she "never felt the same towards him as she did her other boy, who was always sweet and never caused her any trouble." His father related how he was forced to mind by a severe father and he did not believe in spoiling kids. We have then a patient partly rejected by his mother and both parents did not recognize that he was a smart, curious, alert, and aggressive boy, who could not meet the standards of behavior which they set for him. He rebelled against these standards and, believing he was no good and not wanted, he was compelled to do things for attention and then he was punished.

Case 3: A little girl, twenty-six months of age, developed crying spells during the night, temper tantrums during the

day, and refused to eat or go to the toilet, following a week in the hospital. Punishment had been tried but it did no good. Her mother stated that everyone felt the little girl was spoiled by the nurses at the hospital. This little girl ate some capsules, which were thought to contain a small amount of mercuric cyanide. Her mother became scared and rushed her to the hospital where she was kept for a week.

The mother was then instructed to give the little girl a great deal of affection, including rocking her for a couple of hours a day, and especially before she put her to bed at night. She improved within a few days and her behavior was normal within a couple of weeks. Here was a patient who might be called spoiled, yet was cured of her misbehavior by a method that most people would call spoiling her.

The reason for the behavior described in these cases becomes obvious, when we recognize the requirements for normal emotional growth. From birth, babies require adequate food, physical care, in order to stimulate maximum physical growth. In analogous manner, they have emotional needs which have to be met in order to promote normal emotional growth. They must receive an adequate amount of affection by parents, who want them in the first place and who accept them as they are in the second place. In addition they must be allowed to grow up in terms of their own individual patterns. The food schedule, amount of food, the amount of affection and the activity of babies differ, depending in the innate patterns or rhythm of the individual baby. When their emotional needs are not met or their individual innate patterns of growth are not recognized, the child may respond by aggressive, unreasonable demands and stubborn behavior we call "spoiled"; or if the baby from birth is surrounded by apprehensive parents, who use him as an emotional outlet (as in the first case), he does not grow up emotionally and becomes an infantile, unhappy, confused and apprehensive, demanding youngster, we call spoiled. In both situations the child does not receive the security he requires and is not allowed to grow up according to his individual pattern of growth.

We can close with a point on which I am sure we all agree. An individual, who receives what he needs in the world, is never a tyrant. This applies to infants and children and adults as well.

The Constancy of the Position of the Mandible and Its Influence on Prosthetic Restorations

By JOHN R. THOMPSON, D.D.S., M.S.D., M.S.

Chicago, Illinois

What's wrong with false teeth? Both the patient and the physician may have such a complaint. The author's studies bring out a little known anatomical fact and indicate how x-rays may be used to check proper making of such teeth (full dentures).

THERE is a wide-spread belief that the relationship of the mandible to the maxilla is dependent upon the interlocking of the teeth in occlusion. This assumption is based on anatomical descriptions of the mandible and observations on skulls. Anatomy textbooks describe the mandible as being a moveable bone with no direct connections, other than ligaments and muscles, with the cranium. Since in skulls the teeth afford the only means of relating mandible to cranium and, since the mandible is moveable, it is not surprising that this assumption has been accepted as a fact.

As a result statements frequently appear that the mandible may assume a new relationship with the maxilla when the teeth are lost or severely abraded. This change is said to be characterized by a mesial drifting of the mandible as well as a decrease in the distance between the nose and chin. The characteristic "caved-in" appearance of the lips in the edentulous is said to be the result of a decrease in the vertical dimension of the face. "Before and after" photographs are usually exhibited as evidence of improved facial balance resulting from the restoration of the normal intermaxillary or vertical dimension.

Two Dimensions of Face

It must be recognized that actually there are two vertical dimensions of the face under consideration. One when the teeth are in occlusion and the other when the teeth are separated and the mandible is at physiological rest. The first exists only during function and is amenable to changes with alterations in the occlusion. This dimension will decrease when the teeth are severely abraded or extracted. In certain types of malocclusion the mandible may be voluntarily moved into an accommodation position in order to attain occlusion.

*From the Department of Orthodontia, University of Illinois, College of Dentistry

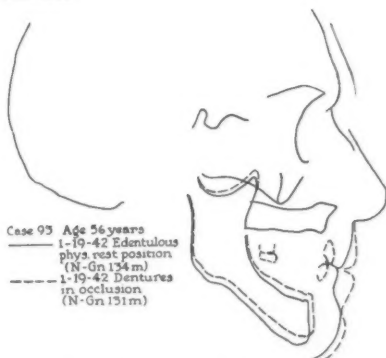


Fig. 1. Case 93, age 56 years. Line drawings taken from x-rays. The black, continuous line represents the appearance of the mandible in the rest position. The fact that all the teeth have been removed does not alter this position, as shown by the fact that when artificial teeth (dentures) are in place and the teeth brought together, the mandible approaches the upper jaw (the broken line representing the position of function).

The second, that established by the mandible in its rest position, is constant regardless of the status of the dentition.

The rest position of the mandible is established very early and is maintained by a balance of the musculature attached to the mandible.

If this concept, that the position of the mandible is dependent on the balance of its musculature, is true then abuse of this principle in any of the phases of dentistry should have undesirable results or effects. For the past three years the departments of orthodontia and prosthetics at the University of Illinois, College of Dentistry, have been investigating the changes that occur after the placement of prosthetic restorations. The method used in this study was roentgenographic utilizing the Broadbent Bolton Cephalometer to position the head. This device permits a high degree of accuracy as the relationship of the x-ray tubes, films and patient are constant and serial x-rays can be made. Therefore, any changes in the teeth, alveolar process or the position of the mandible can be accurately recorded and studied. Several x-rays of

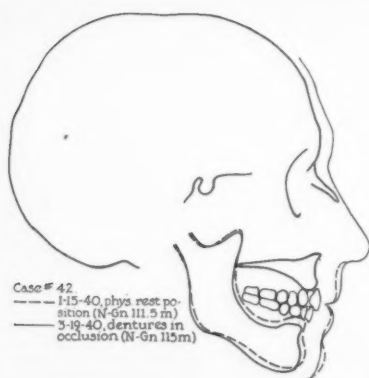


Fig. 2. Case 42: A similar tracing from x-rays in a patient who has been fitted with improper artificial teeth, except that here the broken line represents the physiologic rest position and the solid line that with a full set of artificial teeth or dentures in occlusion (in contact). Because the dentures will constantly push the mandible beyond its normal rest position, bone resorption will take place until the mandible can return to this position. This absorption took place as illustrated in Fig. 3.

Technically, this error may be summarized by saying that the full dentures have excessive vertical dimensions; the limits of the physiologic rest position have been exceeded by 3.5 m. No allowance has been made for the freeway space, usually 2.5 to 3 m. The bite has been opened 6 m. too far.

the head were made on 90 patients requiring complete or partial dentures. These were taken before any extractions were performed, where necessary, after the extractions, before the insertion of the dentures, after the insertion of the dentures and at approximately six month intervals thereafter.

The evidence, reported in detail in another paper*, strongly supports the contention that the physiological rest position of the mandible is stable. If

*John R. Thompson and Allan G. Brodie: Factors in Determining the Position of the Mandible, *J.A.D.A.* 29:925, June 1942.



Fig. 3. Case 42: After the artificial teeth had been worn for 13 months, bone resorption has taken place (shaded area). There are shown superimposed tracings before and after the full dentures had been worn for 13 months. The bite has closed down by resorption of the underlying bone. Note that the vertical dimension of the face is both of the edentulous tracings is the same.

The improved facial outline is the result of the dentures supporting the lips rather than an increase of the vertical dimension (total face height at physiologic rest position of the mandible is 134 m. and with dentures in occlusion—teeth in contact—is 131 m.)

the mandible is carried, by artificial restorations, to a position beyond that of physiologic rest, it will return to this position at the expense of unnecessary resorption of the supporting bone. This is unquestionably one reason for failure of certain denture cases.

The mandible normally has a constant position, when at physiologic rest with the teeth separated and its muscles balanced. Dental extractions do not affect this position.

When the teeth are in contact (occlusion), the position of function is assumed. This position is markedly altered by extraction or severe abrasion of the teeth.

1753 W. 95th St.

Symptoms Are Important

So far as the patient is concerned, disease consists of symptoms. It is for these that she consults the physician. They represent the earliest manifestation of disease and are therefore of primary importance. They are the clues of clinical riddles.—JONATHAN MEAKINS, M.D. in *Practice of Medicine* (C. V. Mosby Co.)

Untoward Effects of Penicillin: Prophylactic Use in Spina Bifida Operation

By S. M. SIMON, M. D., Willard, Ohio

SPINA bifida is well described in practically every medical or surgical textbook. The prognosis in marked cases is not favorable. Especially in the very young, the chance of infection and rupture of the sac is great, with fatal meningitis infection following.

The defect occurs once in every thousand births. When it develops in the fetus in utero, the infant seldom lives to be one year of age. In the absence of hydrocephalus, deformities of the extremities, trophic ulceration or paralysis, favorable results have followed operation in few cases if performed while the baby is very young. Since penicillin has become available, it would seem that the chances of a favorable outcome of the operation and prevention of infection of the meninges have improved. After reading the literature on use of penicillin, I have come to believe that the compound could be used successfully as a prophylactic measure. Such a case is reported here — the first, I believe, of its kind.

The sodium salt of penicillin is 90 per cent specific in certain types of meningococcal infections, but the toxicity, in cases such as the one presented here, is not mentioned in the literature. The Office of Civilian Penicillin Distribution and the manufacturers in their pamphlets describe toxicity, and I quote three manufacturers' statements as examples taken from their descriptive pamphlets:

(1) "No serious toxic reactions have been encountered following the clinical administration of penicillin. In the doses used clinically penicillin has no harmful effect on the blood-forming organs, the liver or kidneys. Febrile reactions have been observed in a few instances. . . . Transient flushing of the face, tingling in the testes, and headache have been encountered on rare occasions. A syndrome resembling serum sickness, including urticaria, arthralgia, fever, sore throat and enlarged lymph nodes and spleen, has been seen occasionally during or following penicillin treatment. Thrombophlebitis occasionally occurs at the site where penicillin has been injected intravenously."

(2) "Animal experiments indicate that

the minimal lethal dose of penicillin for man is far greater than the therapeutic dose. Most of the undesirable effects seen clinically have been attributable to hypersensitivity in 500 cases.

(3) "The systemic toxicity of penicillin is exceedingly low; in fact, the drug is apparently non-toxic far beyond the range of therapeutic dosage."

The quoted statements made by three well-known manufacturers of penicillin are not strictly uniform. We have used the purified salt of penicillin made by a well-known laboratory with a fine reputation. The drug was used strictly according to directions and was kept on ice and was not allowed to come into contact with any impurities.

In the case reported here, further untoward effects resulted namely, apnea, respiratory embarrassment, cyanosis, convulsion, sudden drop of temperature (elevation followed after oxygen revival). It is believed that these should be added to the literature and stated in the pamphlets accompanying each package. The following sentence is suggested: "When the drug is being used in massive doses not as recommended, and in heavier concentration (i.e. in spinal canal), oxygen inhalation, supplemented with artificial respiration, until the concentration in the tissues and blood abate, should be used as an antidote and as a life-saving measure."

As soon as our patient became cyanotic, oxygen revived him, and with the discontinuance of oxygen the cyanosis returned at once with apnea. For about three hours (which is about the time required for the excretion of the drug), oxygen had to be used, until the general condition of the patient improved.

Case History

J.A.B., baby boy, temperature 102° F. rectal, weight 8 pounds, was born in a hospital and attended by another physician. I first saw him 5 days after birth. According to the parents it was a normal birth, secundipara. The baby was well developed. The Wassermann test was negative, the skin of normal color, and the muscles well developed; no evidence of paralysis. Spina bifida posterior (meningo-myelocoele) present at the site of the fourth and fifth lumbar

vertebrae region, the size of a goose egg, about 4 inches in width, circumscribed at the base. The spinal cleft was the size of a half silver dollar. On verifying by x-ray, the posterior processes of the fourth and fifth lumbar vertebrae all were absent. Upon transillumination of the sac, the nerve roots of the cauda equina could be distinguished. No neurologic symptoms with the exception of slight rigidity of neck. Slight necrotic changes commenced one day ago over the fundus of the growth. The head was normal in every respect and the skull well developed for his age. No hydrocephalus or increased pressure over the fontanels was present. When crying, the pressure in the meningocele was increased, and it was distended extremely, but the fontanels did not show any appreciable change. The high mortality in such cases was explained to the parents. Since rupture of sac seemed to be imminent, operation was carried out.

Operation: On inspection and palpation the growth was not pedunculated or sessile, but joined the body with normal, healthy skin at the base. The fundus was covered by a very thin epidermis only, which appeared more like the spinal membranes themselves. The tension was much increased, and fear of rupture without the slightest provocation was anticipated. Under light chloroform anesthesia, operation was commenced following the aspiration, with a needle, of the fluid from the sac. This contained about 60 cc., of 50 cc. was aspirated and immediately replaced with 20 cc. of 100,000 units (5,000 units per cc.) sodium penicillin. This was well diluted and the spinal fluid still in the subarachnoid space reduced the dilution further. Longitudinal incision (curved) was performed a half inch from the base. Partial obstruction caused by the patency of the cleft was noted. The sac was carefully dissected, the fundus excised from the base, and the sac removed entirely (on account of the external, slight necrotic change), purse string method, and stump was sutured to the upper end of the cleft. Muscle flaps were laterally stitched over the opening, which was made into a watertight closure. Another 100,000 units of penicillin, 5,000 units per cc. dilution, were injected into the lumbar muscle, from which the flap for the closure was taken.

The child became cyanotic during the closure of the wound and went into a convulsion. Respiration gradually became irregular. Oxygen was started at

once. This was kept up for three hours. During this time the oxygen mask was removed at intervals, whereupon the child went into a convulsion at once, respiration ceased and deep cyanosis appeared. Apparently, this phenomenon was brought on by the massive penicillin concentration in the blood. This phenomenon started 30 minutes after the second injection of the penicillin, when the external wound was sutured. There was no definite way to determine the penicillin concentration in the blood in this case. The oxygen was continued.

While the patient received oxygen, the skin was of normal color and breathing was normal. We felt that as soon as the penicillin concentration in the blood and spinal fluid abated the child would regain consciousness. Three hours after the operation, which lasted, with full closure and dressing, 50 minutes, the child started to move all extremities, urination and defecation followed, and a lusty cry was emitted. The oxygen inhalation was stopped at once. After reinforcement of the bandage with a specially made support of the back wound, as in any other hernia operation, the child was put to breast. The temperature when the operation started was 102° F. rectally; at closure it was 103.6° F. It ranged between 103° and 104° F. for two days, and then returned to normal. An additional sodium penicillin 200,000 units intramuscularly (5000 units per cc.) was given in 25,000-unit doses every eight hours. Therefore, hypersensitivity cannot be considered in this case. The patient's wound was dressed seven days after the operation; there was no evidence of seepage, and the wound looked very clean. The child gained two pounds in the first two weeks after the operation. He is lively and doing exceptionally, well, like any other normal child.

Summary

Accepting the facts as stated in the literature of the mild or no toxicity of sodium penicillin, massive doses of 100,000 units diluted in 20 cc. of normal saline were used in the subarachnoid space. The handling of the material was according to the directions with the package. This was followed within 20 minutes by the injection of another 100,000 units in the same dilution intramuscularly, in an infant 5 days of age, during an operation for spina bifida posterior (meningomyelocele). The operation progressed nicely, without shock or other symptoms, until the finishing touch, 30 minutes from the second penicillin injection. The patient became cyanotic, respiration became irregular and ceased

several times. Convulsion developed which lasted only a short time and returned again when oxygen was discontinued. Respiration was restored at once manually and by the oxygen pressure. Oxygen was continued for three hours. When the mask was removed at each instance, the same condition (with extreme cyanosis) developed at once, and the patient began to convulse, and it ceased at once as soon as the oxygen was restored. As soon as the penicillin in the blood became depleted, which was in three hours, consciousness was restored. Penicillin, 25,000-unit doses, was followed up every eight hours until 200,000 units were given, and the temperature became normal. This has lasted to date, which is over four weeks from the date of operation. The child takes nourishment and is normal in every respect. He has already gained four pounds. The rigidity of the neck disappeared entirely.

Conclusion

This is the first reported case at this early age where such heavy dosage of penicillin was used and where such a toxic reaction was noted. Penicillin may be toxic if given in large doses, and the outcome of the toxicity caused by penicillin may be fatal.

Oxygen with artificial respiration is the most effective antidote for cyanosis, apnea and convulsion in "penicillin poisoning."

Meningeal irritation is the first symptom which requires massive doses of

penicillin to prevent a fulminating meningitis.

Such toxic reactions should be included in the directions for use of penicillin in each pamphlet contained in the manufacturers' packages. When oxygen is on hand, "penicillin poisoning" can be easily controlled, and there should be no fear of a fatal outcome, which may possibly follow an overdose.

(To make this article more complete, an additional explanatory note was requested of the author, Dr. Simon was kind enough to submit the following: "The chloroform anesthetic did not cause the cyanosis or apnea, because only a few drops were used sufficient for narcosis only. After it was stopped, the patient was normal for 30 minutes with good color, respirations normal, and no increase of pressure in the fontanelles, nor was any pressure noticed while the cyanosis existed.

"I have seen another case where cyanosis existed after administration of penicillin, but not as severe as in this case. During chloroform or other general anesthetic administration, the patient comes out of the anesthetic at which time the pressure abates.

"In this case, the baby was out of the anesthetic and narcosis in the last 20 minutes of the operation. Thirty minutes after the penicillin injection, cyanosis and apnea developed. There is no doubt in my mind or in the minds of other physicians that penicillin was the factor causing this phenomenon." SMS.)

COMING ARTICLES

Anesthesia in Office Practice

Physical Medicine in General Practice

Accuracy in Diagnosis

Infiltration Therapy in Acute Calcific Tendinitis

Diagnosis of Cancer of the Colon

Dark Field Microscopy in Infections

Artificial Respiration: Its Importance to You

Physical Therapy Treatment of Muscle and Joint Pain

New Approach to the Problem of Functional Indigestion: Treatment

Tropical Diseases You Should Know

The Acute Surgical Abdomen: Diagnosis and Choice of Procedure After the Abdomen Is Opened

The Sensitive or Allergic Nose*

Vasomotor Rhinitis, Seasonal or Perennial Hay Fever

(A Symposium)

Causes:

foods, feathers, furs, pollen, cosmetics (orris root), house dust, animals, spores of fungi, drugs (aspirin, quinine).

Diagnosis:

A. *History*: 1. Family history of urticaria, eczema, hay fever, asthma, migraine, angioneurotic edema.

2. Type of symptoms: Sudden, recurrent attacks of nasal obstruction, with or without sneezing, itching and watering of eyes and nose.

3. Time of symptoms: (a) Seasonal: Spring, summer, fall or winter, due to pollen, or to one food available only in one season. (b) Perennial: Food or pollen where there is year around exposure. Dust in house or place of work, chemicals at home or work (insecticide, tobacco, flour, animals etc.) (c) Night or morning: Feathers in pillows.

4. Place of symptoms: (a) Home: House dust, feathers in pillows, flour, cosmetics, wool, dog, cat, horse, insecticide, mold. (b) Work: Dust or chemicals inhaled (Baker—flour; druggist—ipecac, caroid), tobacco.

5. Weather: Changes in temperature and moisture, especially winter weather, often aggravate the symptoms.

B. *Physical Examination*: Turbinates are boggy, edematous, pit on pressure with an applicator, pale.

C. *Nasal discharge* is thin, never or rarely purulent, contains eosinophiles on microscopic study.

D. *Skin tests and/or elimination diets* indicate which foods, dust, pollen, chemicals, or animals are causative.

E. *X-ray* of sinuses may show a "cloudy" or opaque sinus due to:

(1) an allergic swelling of the mucosa of the sinus, (2) sinusitis secondary to the allergic rhinitis, or (3) lack of air in the sinus due to allergic edema blocking off the normal openings (ostia) into the sinus.

"Attacks of Sinusitis"

Attacks of allergic rhinitis are often diagnosed as sinus infections. There is no malaise or fever associated with allergic rhinitis, and pus is rarely found in the nose or posterior pharyngeal wall.

Chronic or recurrent nasal allergy may result in thickening of nasal mucosa and formation of "mulberry" appearing turbinates or of polyps which appear as glistening, grey-white, movable (on touching with a probe) "skinned grape" masses.

Diagnostic mistake: "Sinusitis" is much rarer than nasal allergy, yet the latter is rarely diagnosed.

Allergy affects the nose producing: (1) edema of the mucosa, (2) eosinophilic infiltration, (3) hypersecretion of the mucosal glands. Clinically the tissues appear pale, swollen and "water-logged" although occasionally they will be pink or red. Hypertrophy of the turbinates is frequent.

The Normal Nose

The normal nose is lined with a single layer of pseudo columnar type cells, each of which has a cilia attached. These cilia constantly "beat" or move nasal mucus and foreign material (dust, bacteria) toward the back of the nose, the nasopharynx. The thin blanket of mucus which lies on the nasal mucosa is protective and should not be washed off with irrigations.

Between the columnar epithelium and the periosteum covering bones or the perichondrium covering cartilage, is a loose, fibroelastic connective tissue which attaches the mucosa. It is this tissue which swells so readily when allergy or infection appears in the nose.

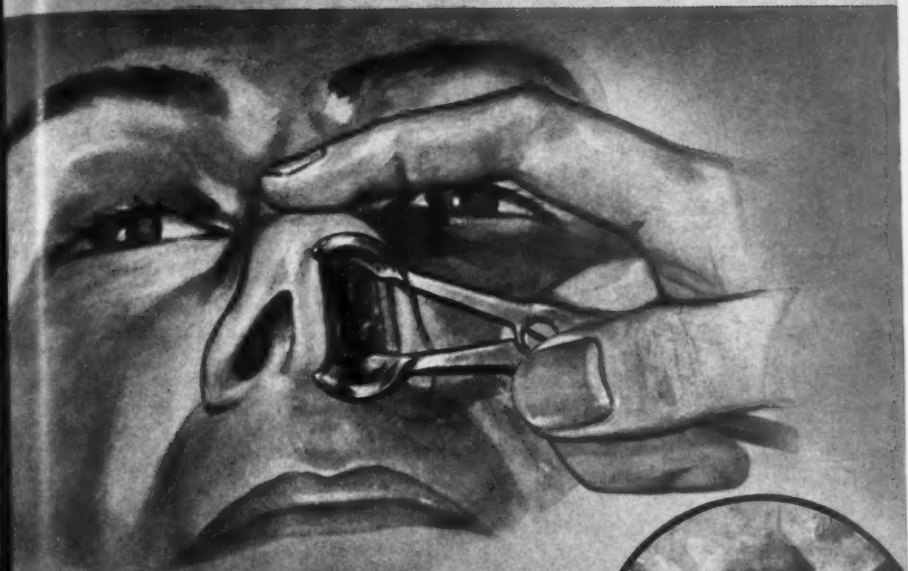
Nasal discharge study: Examination of the nasal discharge under the microscope (after smearing on a glass slide and staining with Wright's or Giemsa's

(Continued on page 81)

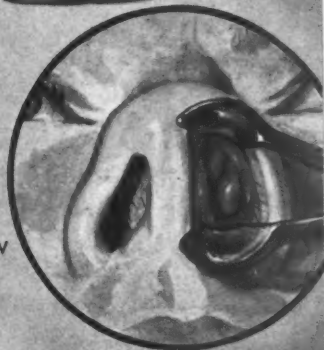
* The collected comments of:

Albert H. Rowe, M. D., University of California Med. School; H. C. Ballenger, M. D., Northwestern University Med. School; Leo H. Crip, M. D., University of Pittsburgh Med. School; R. L. Gorrell, M. D., USPHS, Trinidad, Colorado, Editor of Clin. Med.

ATROPHIC RHINITIS



ATROPHY OF INTRA-NASAL
STRUCTURES



SPECULUM VIEW
IN NORM



CRUSTED
NASAL DISCHARGE

F. Netter
M.D.

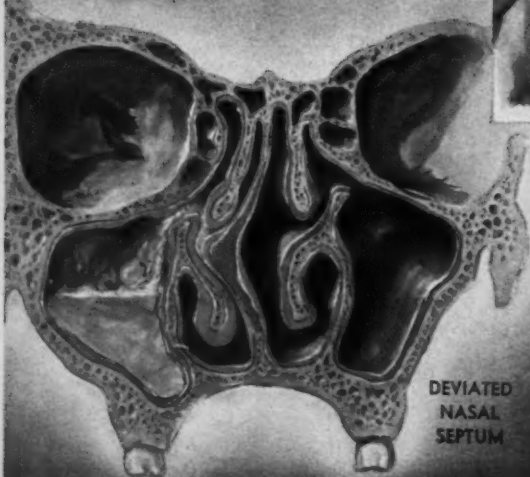
ACUTE RHINITIS



ACUTE RHINITIS
WITH BLOCKAGE



ACUTE RHINITIS
AFTER SHRINKAGE



DEVIATED
NASAL
SEPTUM

ACUTE AND CHRONIC NASAL ALLERGY

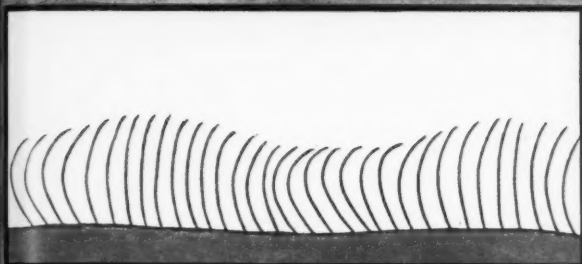


ASPECT IN HAY FEVER

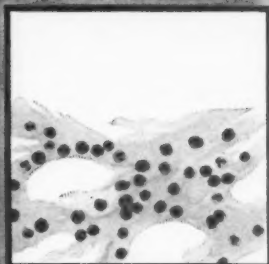


NASAL POLYP

CILIARY BEAT (schematically)

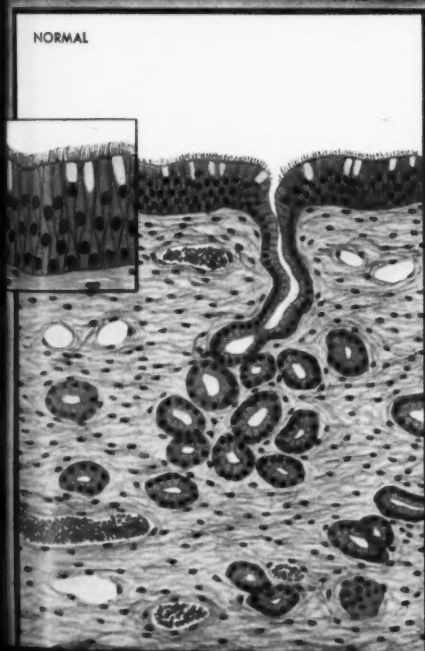


ALLERGIC RHINITIS

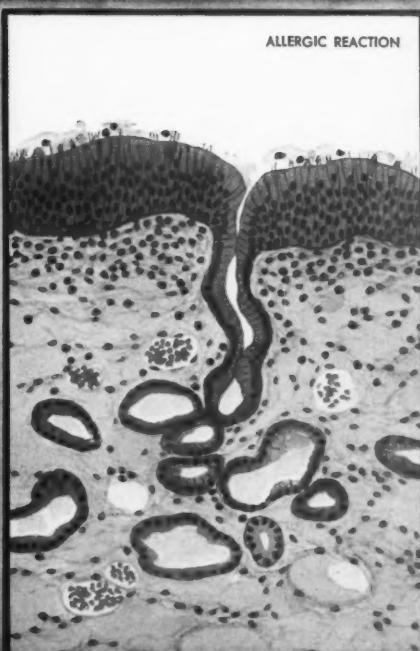


NASAL MUCOUS MEMBRANE

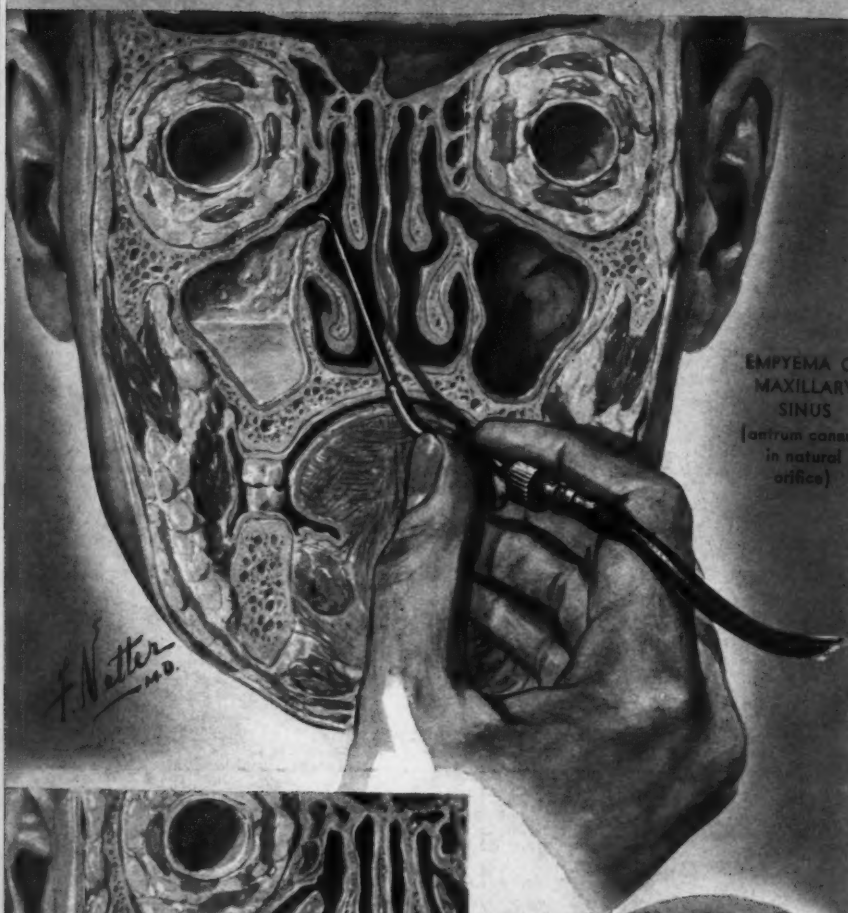
NORMAL



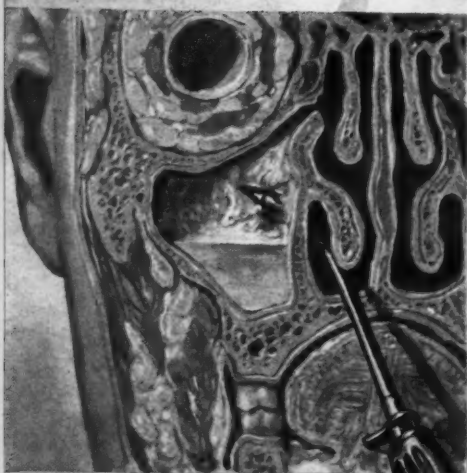
ALLERGIC REACTION



MAXILLARY SINUSITIS



EMPYEMA OF
MAXILLARY
SINUS
(antrum conus
in natural
orifice)



TROCAR PUNCTURE OF
MAXILLARY SINUS



GLASS DISCHARGE IN
MAXILLARY SINUSITIS

Inhalant Versus Food Nasal Allergy

	Inhalant Allergy	Food Allergy
Sneezing	Marked	Absent
Obstruction	Variable	Marked
Watery discharge	Marked	Little
Itching	Severe	Little or none
Red, watering, itching eyes	Marked	Little or none
Increased by	Pollen, dust, feathers, animals or other cause	Eating more of causative food; worse in winter, near ocean
Turbinates appear	Pale, swollen	Pale unless inflamed from infection; if chronic, polyps appear, thickened turbinates ("mulberry" appearance)

stain) may reveal many eosinophiles or many pus cells. The presence of eosinophiles is suspicious of an allergic condition, but their absence does not prove that allergy can be ruled out. The presence of pus cells in abundance indicates that a true infection is present. Sinusitis may follow allergic blocking of the sinuses.

Examine Every Nose

Even in the home, it is easy to examine the nose with the otoscope and a large speculum. Careful inspection of the nose may reveal purulent discharge which has been causing a cough, or a rhinitis which may account for an otherwise unexplained fever. A cold may remain confined to the nose and the throat appear perfectly normal.

Surgery

Surgery of the allergic nose or sinuses is contraindicated, except to remove polyps or straighten truly deviated septa.

Anatomy

The explanatory and helpful color illustrations on allergy rhinitis, and sinusitis in the "Pictorial Section" of this issue (from a series of twelve) portray Normal and Pathological Anatomy of the Nose and Accessory Sinuses. These were prepared by independent clinicians and drawn by Dr. Frank Netter under a grant by Ciba Pharmaceutical Products, Inc., Summit, New Jersey. Other color plates from this series will appear in CLINICAL MEDICINE during the year; look for them.

Allergic Versus Infective Rhinitis

	Allergic	Infective
Appearance of nose	Pale, edematous turbinates	Red, inflamed, swollen turbinates.
Discharge	Thin, watery; contains eosinophiles.	Serous, becoming mucopurulent; contains pus cells.
Response to vasoconstrictors	Obstruction not relieved quickly; usually recurs very rapidly.	Obstruction relieved readily; usually a slow recurrence.
Onset and course	Sudden attacks, with partial or complete relief between, dependent on inhalation, ingestion or absorption of causative allergens (including bacteria).	Slow onset with persistence for days, until thick pus forms, gradually disappears.
History of allergy	Hay fever, asthma, eczema or migraine in other members of family. Other allergic manifestations present.	There may, or may not be a family history of allergy. Allergic manifestations usually absent.
Symptoms	Congestion, sneezing, itching of nose, eyes or palate; no constitutional symptoms.	Congestion, slight fever, chilly sensation, malaise, and fatigue.
Nasal Smear	Predominance of eosinophiles.	Eosinophiles usually absent. Many pus cells.
Skin Tests	Usually positive.	Usually negative.

Sulfathiazole Nasal Jelly in Colds

(Further Report)

By R. S. MACARTHUR, M.D., Los Angeles, California

THE incidence of colds, the extent throughout the country and the effect on industry, have been so frequently commented upon that no further elaboration is necessary. Sufficient to say that nasal congestion and sequelae are the greatest cause of work-time loss, and amount to three hundred million cases in the U.S. each year.

Since its introduction (See Clin. Med., Apr. 1942, p. 101.—Oct. 1942, p. 295) 3% sulfathiazole nasal jelly has been used in some seven thousand cases of common cold without a single complaint of non-effectiveness or unpleasant after effect. Considerable time was necessary for three separate pathological laboratories to determine that the jelly was not harmful to the mucus membrane of the nasal passages. No damage to the cilia or mucus membrane was found.

From the clinical standpoint, it has been my experience that the earlier in the cold the jelly is used, the sooner a cure is effected. This means that if a cold appears during the day, and is treated that afternoon and evening, the patient is usually free from the affliction the following morning. However, even if a cold is well established for two or three days, marked relief is frequently experienced within ten or fifteen minutes, indicated by free nasal breathing, showing that the presence of a vaso-constrictor or astringent is usually unnecessary.

Safety of the preparation is emphasized by the fact that while the dose of sulfathiazole for internal administration is up to sixty grains, the dose of jelly contains but half a grain. The distribution of nasal jelly to all parts of the upper respiratory tract is due to ciliary action. As Fabricant has pointed out, the mucus of the upper respiratory tract is in continuous motion and changes every four to ten minutes.

Alkalinity of the jelly is required both for the stimulation of the cilia to increased motion, and to enhance the bac-

teriostatic effect of the sulfathiazole. Schmelkes (Surg. Gynec. & Obstet. vol. 77, page 9, July 1943,) states "Between a pH of 5 or 6 it was found that sulfathiazole and sulfadiazine exhibit only a fraction of their maximum activity." Cilia beat vigorously in an alkaline medium, and slow down in a medium of pH 6.4 or less (V.E. Negus—The Action of Cilia and the Effect of Drugs on Ciliary Activity.) Less intra-nasal discomfort is caused by pH above 7.4 than by comparable deviations below (S. N. Parkinson—Body Fluid as the Criterion for Solutions for Nasal Treatment, Ann. Otol. Rhin. & Laryng. 51:153, 1942.)

Acid solutions inhibit the action of the cilia, and ordinary water causes slowing of the ciliary beat when applied to the mucus membrane of the upper respiratory tract. (Lierle and Moore—Effect of Drugs on Ciliary Activity of Mucosa of Upper Respiratory Tract, Arch. Otolaryng. 19:55, 1934.)

Absorption from the nasal mucosa is very slow. Crile, (Cleveland Clin. Quart. July, 1941), stated: "Apparently there is little or no danger of over-absorption of the sulfonamide drugs when they are implanted in wounds or sprinkled upon raw surfaces.

"It is safe to state that the absorption of these drugs from wounds is invariably much less rapid than their absorption if equivalent amounts are given by mouth, and that much more of the drug can be safely implanted in wounds or sprinkled upon raw surfaces than be given orally."

The hazards of systemic treatment—particularly renal complications—are obviated. (Green & Parkin, Lancet, Aug. 1942.)

The applicator is designed to place a measured dose of half a grain of sulfathiazole well into the nasal entrance where ciliary activity is most pronounced so that its distribution to the nasopharynx and sinuses is accomplished within a few minutes.

4757 S. Broadway

The mind is like a mechanical instrument that plays a great variety of tunes, but it must play them in succession. One idea recalls another, but it at the same time excludes all others. In trying to renew old recollections, we cannot as it were unfold the whole web of existence; we must pick out the single threads.—WILLIAM HAZLITT.

Recent Trends in Obstetric and Gynecologic Therapy*

By HARRY G. LAFORGE, M.D., Buffalo, New York

CAUDAL ANESTHESIA: 12 deaths have been reported in 30,000 deliveries. It is often difficult to get the needle into the caudal space.

Rh factor: Its importance has been increasingly demonstrated. Nothing new in treatment has been found, except transfusions with Rh negative blood.

The intravenous injection of ergonovine immediately following delivery results in a marked decrease in blood loss before the placenta is removed. The average loss of 300 to 400 cc. of blood was reduced to 30 cc. by this method. Three placentae were retained in a series of 1,000 deliveries.

Right lower quadrant pain during pregnancy may be due to tenderness in the corpus luteum (early in pregnancy) or tenderness in the right round ligament.

Perineorrhaphy: The round needle should be passed widely out into the labia majora to pull in tissue. Later gaping of the vulva is thus prevented.

Decreasing puerperal morbidity; If infection may be possible, stilbestrol should be given during the puerperium. 5 mg. stilbestrol may be given daily for 9 days after the delivery. Such therapy is harmless but decreases the number of breast fed babies.

Painful lactation may be treated with stilbestrol. Breasts may be dried up by the same therapy, namely 5 mg. of stilbestrol daily.

Sterility: As a last resort, after all tests have proved negative, one may prescribe a douche of Ringer's solution and glucose, to be given preceding intercourse. A commercial preparation (Nutri-Sal)[†] is available. The sperm life is lengthened by this procedure.

Vaginitis and cervicitis may be treated by acid jelly, alone or in combination with sulfonamides. Monilia (thrush) infections respond well to thymol with a detergent to lower surface tension.

*These notes summarize the important points presented by Dr. LaForge before the Joint staff meeting of the Buffalo General-Children's Hospitals, Jan. 31, 1944.

[†]Ortho Products makes the Nutri-Sal douche advised for such cases of sterility.

Bilateral oophorectomy should be followed by a graft, if any normal ovarian tissue can be found. Very thin slices (1 to 2 mm.) of normal ovary should be placed in the rectus muscle. The graft has a fairly good chance of taking, if it is cut very thin. Menstruation continues if the graft takes. Cysts may form in the transplanted section of the ovary (later).

Amenorrhea: Oral treatment consists of endometrial priming with stilbestrol, 2 mg. daily for 5 days, beginning on the first day of the month and progesterone in 10 mg. doses daily for 5 days, beginning two weeks later. This treatment is to be repeated for several months.

Anovulatory bleeding in girls may be treated by stilbestrol 1 to 3 mg. daily for 2 weeks, followed by progesterone for 10 to 14 days in 5 mg. doses daily.

Dysmenorrhea is relieved by estrogenic therapy, which stops ovulation and is thus an irrational method of therapy. From 25,000 to 50,000 units of Theelin or stilbestrol are given in the early part of the cycle.

Menopause: Estrogens may be given to depress pituitary activity and nervous instability. There are new drugs (monomistrol, Hexestrol, estinyl) which are less toxic than stilbestrol. The dose of stilbestrol is .01 mg. daily to immunize the patient; the dose may be gradually increased until effective levels are reached.

Discussion by Dr. Louis A. Siegel:
1. Rh factor — Give Rh negative blood transfusion. One may save 40 percent of patients with erythroblastosis fetalis. If child has erythroblastosis, the mother must receive Rh negative blood, at any time later, to avoid transfusion reactions.

2. Postpartum hemorrhage does not occur or is rare after ergonovine has been given intravenously. This treatment is so effective that interns have almost forgotten that packing of the uterus may be needed to control hemorrhage.

3. Stilbestrol stops the congestion of lactation, not lactation itself. If the baby is kept on nursing, breast milk will continue to be secreted.

Editorial

Helping Boys and Girls

This editorial is aimed at the forward thinking physician who wants to help others, who feels that in the future the doctor cannot hide in his office and practice medicine in a vacuum.

A LARGE proportion of the teen age boys and girls are spirited, puzzled, restless and lack leadership. They are following the trial and error path toward a makeshift or unknown goal.

They need instruction and help from parents, churches, schools, and physicians.

What the Physician Can Do

One of the greatest opportunities for service lies in the hands of the medical profession. Yet outside of the ward or the medical classroom, physicians as a whole are woefully disinterested teachers.

At the bedside, the physician presents a strange aversion to the dissemination of health information. In the consultation room, he diagnoses and prescribes largely on the basis of the physical findings, seldom inquiring into the possibility of some emotional turmoil as the contributing factor and fortunate indeed is the patient who learns what this examination has revealed.

Refusal to Answer Questions

In what category does a boy list a physician who, when asked for advice, says, "You're a red blooded animal; go and find out." What is a girl's opinion, when, following a similar query from her, he laughs and says, "Oh, don't bother your little head. Your mother got along all right and she never asked questions."

To whom will the parents, schools and churches appeal, if the physician, obviously embarrassed retorts, "No sir, I won't touch those topics. They are hot stuff."

But when the physician is aroused to a sense of his responsibilities his reward is great, for fortunate is the doctor who has the friendship and confidence of boys and girls. He who turns it aside is denied some of life's most satisfying experiences.

The family physician explained, to his patient, his condition in detail, demand-

ing in return to know, what "was going on" in the family. This information utilized judiciously by him in those days of meager facilities was often as miraculous in its cure as a dose of penicillin today.

In spite of criticisms, the physician occupies a strategic position in the minds of the great majority of persons.

Unfortunately, physicians as a class are not inclined to delve into the inadequacies of the home in connection with the care of his patients. Failure to do this seems to spring from a number of causes, including:

1. Indifference
2. Let the other fellow do it, presumably the church or school
3. Too little time; too much trouble
4. A certain shyness, even fear

What the Parents Can Do

Too few parents read books of any kind. Few are interested in those which offer guides in homemaking or in those devoted to child care.

A large proportion of parents are intellectually unable to guide the destiny of their children at any age. Many others fail through selfishness or neglect, a large number through indifference and far too many because of conflicting temperaments or emotional instability. An amazing number expect this service to be given by the church and the schools.

Yet, parents must do their share and special study programs must be brought to them, with talks, visual aids and demonstrations. These should be practical, interesting and largely elementary in character.

Learning about life in all its phases should begin in the home, in the cradle age. Both parents should instruct, counsel and guide. This responsibility does not cease when the church and school enter the picture.

What the School Can Do

Too few schools offer home making knowledge in an all-inclusive way. It is the girl student, moreover, who receives the bulk of the meager instruction.

Today, along with the presentation of some of the material features of daily

living, there is interspersed a certain amount of ethical training, the scope of which depends largely upon the view and enterprise of the home economics teacher, the principal and the school board or all three.

Some schools just prior to graduation offer to the senior class a few "talks" on character building and sex information. These are steps in the right direction but they should be made more complete and over a longer period.

Summary for the Physician

To refuse to serve is regrettable. To place stumbling blocks in the paths of those seeking knowledge or those offering it, is difficult to understand, yet this has been done many times, especially in the field of public health. Why is the physician reluctant for his patients to learn some simple truths, thus enabling them to cooperate more intelligently? Is it lack of time or patience? Is it a form of ego?—S. E. FOULKES, M.D.

The real tragedy of life is not in being limited to one talent, but in the failure to use the one talent.—EDGAR W. WORK.

Speransky's Theory of Disease

If the curing of lobar pneumonia by the intracutaneous injection of 0.5% novocain solution into the rhomboid region is confirmed by other clinicians, it will be up to us to study respectfully Speransky's theory of pathogenesis. Similarly, if later work confirms the reported cure of rheumatoid arthritis by "spinal pumping" after the administration of sodium salicylate, we shall have to assign a new meaning to psychosomatic medicine.

In the October (1944) issue of the *American Review of Soviet Medicine*, there are translations of papers by A. D. Speransky himself, and by E. M. Ginsburg. Also an article by Joseph and Theodore Gillman of Witwatersrand University in Johannesburg entitled "Speransky's analysis of the role of the nervous system in disease" which gives some of their own results with their own patients in South Africa.

Altogether it causes one to wonder if Speransky is not right in being dissatisfied with the traditional approach to the study of the organism in health and disease. At any rate it would help us to understand better the term "neurotropic"; and the shortcomings of the theories of Virchow and Pasteur.

A translation of Speransky's book (*A*

Basis for the Theory of Medicine) was published in New York in 1943 by the International Publishers Co., edited by C. P. Dutt.—G. H. MOXIE, M.D.

Paralysis Following Serum Injections

One uncommon complication of the injection of tetanus antitoxin is a paralysis of the posterior scapular group of muscles and subsequent atrophy of the infraspinatus and rhomboid muscles. The patient does not complain of any symptoms.

This lesion was called to my attention by Frank N. Potts, M.D., the witty orthopedic surgeon of Buffalo, New York.

He writes (December 1944) concerning this topic: "It was nice to get your letter even though it brought up the embarrassing question of paralysis following injections of tetanus antitoxin."

"Unfortunately, I am not prepared to give any more information on it than you already have in your notes. It has been experienced in a few cases, that it clears up in about one or two years, in spite of any treatment. I expect that physiotherapy to keep the muscles in tone would be a sensible form of treatment. F. N. Potts."

A review of the common books on medicine, surgery and neurology does not show that the subject has ever been properly buried in them, but the practitioner should be aware of the occurrence of this rare complication.

Renascence

(for Dr. George Burt Lake)

Philosopher and poet, mentor, friend,
You gave us calm assurance of rebirth;
"When I have travelled to my journey's end,

There will be no cessation, and no dearth
Of future habitation for my soul."

"When I have cast aside this out-worn shell,

I shall be born again, untrammelled,
whole."

"Deo volente, I shall always dwell

Reincarnated in some glad surprise."

Philosopher and poet, mentor, friend,
You are returned to us in tender guise,
Where tears and laughter and old wisdom
blend:

Today, I saw you in a baby's eyes.

Deo volente, nothing ever dies.

Ruth Crary Clough.



CLINICAL NOTES and ABSTRACTS

Microfilm copies of any of the published papers here abstracted, up to 25 pages, may be obtained for 25 cents from Microfilm Service, Army Medical Library, Washington, D.C.

The Practical Management of Headache

The commonest of all symptoms is headache. Most headaches do not come from the eyes.

Dr. Proetz has made a classification which, he says, "is thoroughly unscientific and at the same time thoroughly practical." Class A, headaches of definite, demonstrable origin—regardless of the origin. Class B, headaches of semi-demonstrable, or questionable, origin. Class C, headaches of undemonstrable origin, "at least to me." The demonstrable causes are local and remote. Histamine headaches are demonstrable and they are definite. He has not seen many histamine headaches. A patient may have anemia and a headache, but it is often hard to attach the headache to the anemia.

Diagnosis

A great many hereditary headaches he finds can be relieved. He disagrees with those who think all severe headaches are simply a matter of eating onions or lobster or rhubarb.

The "idiopathic" headaches are largely vascular in nature. They may be caused by endocrine disturbances, hypertension, or a number of other things, "but the causes do not become apparent through any laboratory test."

Most important, he regards the history—"a complete headache history which is written down according to a definite plan, preferably upon a prepared chart, with symptoms in juxtaposition which ordinarily would seem to have no relationship."

Some of the references are to foods, and some are to contacts, like dogs and face powder and feathers. The patient records his exposures on his chart for two or three weeks. The patient may be subjected to several postural strains. He may have a headache because he works

long hours, does not get enough sleep or is worried about his boy at the front.

Very few headaches has this doctor found due to nasal causes or to the sinuses. The periosteum, we are reminded, is closely bound to bone, so a sudden pulling or a distortion of the periosteum may cause sinus pain. Certainly a distortion of the mucosa does not. Tugging on the venous spaces and on the arteries of the brain and its covering is another thing.

In patients with hypertension, headaches are most common when the pressure is coming down.

Treatment

The first thing Proetz does with a patient with headache of no demonstrable cause is to prescribe ephedrine with a little secenal morning and evening for a few days, or t. i. d. It is surprising the number of people whose headaches disappear, and stay away for some time. If the patient gets any reaction to ephedrine, you should look farther into the vascular causes.

What is the next thing to try? The administration thyroid extract. There are people whose basal metabolic rates are -5 to -5 who suffer from thyroid deficiencies, with headache. Often they complain of fatigue, even after plenty of sleep. It is surprising how many of the patients without a demonstrable thyroid deficiency will recover from their headaches on thyroid extract. He has found people with a basal metabolic rate of -2 or -3 do well on 2 and 3 grains of thyroid extract who will not respond to 1 grain. One can increase the thyroid administration to an extent otherwise inadvisable and cure the headache, by giving thiamin at the same time. The two things Proetz finds most valuable are the ephedrine experiment and the thyroid treatment.

Some of his patients' headaches come on suddenly, often with hunger or in some relation to the ingestion of food—a severe headache across the brow and usually radiating across the top of the eye and down to the occiput. In many such cases, an enema stops the headache. A laxative, given in time, may prevent such a headache.

Hunger is a frequent cause in people who wait too long for lunch. They get a headache when they become hungry, but eating does not stop it. It is well to eat something about 11.

About alcohol he asks: Not, do you drink? but, how much do you drink? What kind of drinks do you tolerate? and in what relationship to food does your drinking affect your headaches?

Patients who have headaches from smoking are usually those with a septal spur or some demonstrable constriction in the nasal fossa, so that eddies are produced which deposit tar in one particular spot. Faulty heating and air conditioning in houses produce the same type of irritation.

There may be two or more causes for the same headache.—A. Proetz, M. D., *J. Iowa M. Soc.*, March, 1944.

Toxemia and Hypertension

The differential diagnosis between toxemia of pregnancy and hypertensive vascular disease may be tabulated thus:

True Toxemia	Hypertensive Vascular Disease
1. Onset late in pregnancy; sudden onset.	Onset early in pregnancy; gradual onset.
2. Hypertension late	Hypertension early.
3. Hypertension disappears by 10th postpartum day.	Hypertension lowers slightly after delivery; never disappears.
4. Primiparas more commonly affected.	Multiparas more commonly affected.
5. Convulsions common.	Convulsions uncommon.

Only recently we have become aware of the importance of differentiating these groups. The hypertensive vascular disease patient does not return to normal after delivery; rather her blood pressure gradually decreases and then levels out at an abnormally high level. Examination of her retina shows spasm of the arteries, and later, hemorrhages. This woman should not become pregnant again; sterilization is often indicated.

The true toxemic patient is apparently but little harmed by pregnancy and does not have a persisting hypertension. — R. L. Gorrell.

Rectal Palpation in Appendicitis

The patient with suspected appendicitis, should always be examined rectally, preferably in the left lateral (Sims) position, as this tends to bring the Appendix downward and over towards the palpating finger (see Fig. 1). In over 50 percent of patients with acute appendicitis, tenderness can be elicited high in the right vault of the pelvis.—Adapted from R. W. Banks, M.D., in Henry Bockus "Gastroenterology," published by W. B. Saunders.

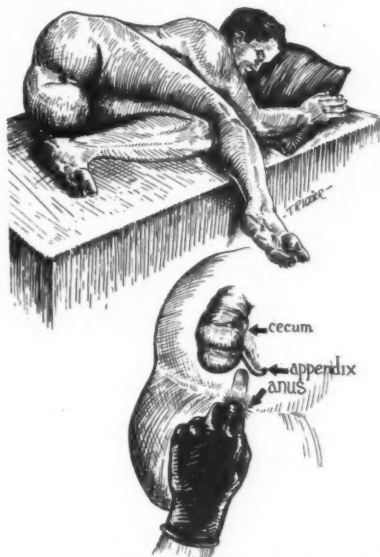


Fig. 1. This illustration indicates the position and method of palpating the appendix. One feels upward for the appendix.

Surgical Anorectal Problems Slough

It seems that somewhere something has been said about slough as a sequel to the injection of phenol and oil, or quinine and urea hydrochloride. Sloughing of the rectal tissues following injection treatment of hemorrhoids has always been a source of worry to those who have employed such treatment.

The cause of slough is the injection of the solution into an area which has previously been injected. An area that "will not take it," if injected under force, will slough.

If the solution is injected where it

should be, into the spaces between the membrane and the underlying tissues; and if the injection is not prolonged to the extent that an ischemic spot appears in the membrane near the site of infection, the likelihood of slough is remote.

The worst sloughs—and these often are necrotic abscesses—are caused by the injection of the solution into the muscular coats of the rectal wall. When a competent operator inserts the needle through the mucosa he knows by the "feel" of the tissue into which the needle is inserted, whether or not he should inject there or change to another location.

Instructions are commonly read as to the amount which should be injected. Some writers have stated that "not more than a few minims" should be injected. Nevertheless, those who inject a few minims may well have more sloughs to deal with than those who inject quantities totalling many cubic centimeters. We do not understand the reasoning which permits any one to state the amount that should be injected, without having first seen the case and the area to be injected.

"The best time to inject a hemorrhoid is the first time." This statement has been repeated at our Clinic over and over again all through the years.

An internal hemorrhoidal mass properly injected will not need to be injected again.

If there is definite resistance to the insertion of the needle, the operator should recognize this as a warning. If he persists, and then feels resistance to the injection, he is further warned. Such warnings must be heeded or slough will result.

The surest way to produce slough is to inject into an area already fibrosed by a previous injection.

Pilonidal Sinus

Local anesthesia is by far the best for operating to remove this condition. Only the skin in the midline an inch or so in width and five inches or so in length is anesthetized. The incision is made in the midline. It goes through the skin, through the nidus, and stops in the normal tissue before going sufficiently deep to injure the coccyx or sacrum. The periosteum not being anesthetized, has natural protection from injury. If it is approached with instruments, the patient will rebel, thus warning the operator. The two halves of the mass are then removed.

The operation is simplicity itself, but the post-operative care demands sagacious attention. Those who are not thor-

oughly familiar with, and ready to persist scrupulously with the aftercare, should not perform the operation.—*Dover Clinic, Dec. 1943.*



Treatment of Epidemic Dysenteries in Young Children

The mortality rate, the degree of morbidity, and the strain on the hospital staff have been greatly reduced by treatment of diarrheas and dysenteries in newborn infants, infants, and young children with the following routine: 12 hours of starvation, with water and medication given in amount and manner according to need; sulfathiazole for non-specific diarrhea and sulfathiazole or sulfaguanidine for specific diarrhea; bismuth and paregoric for extreme treatment-resistant infections; polyvalent dysentery antiserum (with striking results in 1 case); plasma and blood transfusions; and milk (buttermilk, skimmed milk, or protein milk) every 3-4 hours in amounts regulated by the appetite of the patient. — K. GLASER, M.D., in *J. Pediat.*, Jan. 1944.



The Management of Gonorrhea in General Practice

Gonorrhea is a contagious disease and should be handled as such by the physician to whom an infected person comes for treatment; that is, as a public health problem, the physician must: 1. Diagnose and treat the disease properly. 2. Find the contacts himself and treat them or report the case to the health department for investigation, and 3. Treat the patient until cure is established.

Other than continence, the condom offers the best means of prophylaxis both for the male and the female, but it must be used properly and removed carefully. The hands and external genitalia should then be carefully washed with soap and water. Chemical prophylaxis is satisfactory for men when carried out as follows: The external genitalia, pubic region and the inside of the upper portion of the thighs should be thoroughly washed with soap and warm water. The patient should then urinate, after which not more than 6 cc. of a nonirritating protein silver solution (10% protein silver or a 1 to 20% strong protein, silver) should be injected into the urethra and held for five minutes and then allowed to escape and the external exposed area (areae) anointed for five minutes with a 33½% calomel ointment. The ointment should be allowed to remain for

some hours. Chemical prophylaxis is not generally satisfactory for women.

The diagnosis of gonorrhea is properly established only by demonstration of the causative organisms by smears or culture, but if facilities are not immediately available for diagnosis, and gonorrhea is suspected, therapy should be carried out as outlined, rather than to permit delay in treatment.

Sulfathiazole

Sulfathiazole should be administered orally in doses of 1 Gm. four times daily after each meal and at bedtime for five consecutive days. The patient is advised to drink at least ten glasses of fluids daily and to report at once if any toxic reactions are noted, although nausea, headache, vertigo, weakness, malaise, irritability and insomnia do not necessitate withdrawal of the drug.

Blood levels, blood counts and urinalyses are unnecessary unless severe reactions occur. The patient must avoid alcoholic beverages and sexual excitement. The course should be repeated after a three to four day rest period. The patient must be observed for at least three months and should be regarded as potentially infected during this period.

Evidence of cure consists of four consecutive negative cultures at two week intervals, the first being taken a week after apparent clinical cure and, in women, one culture taken immediately after menstruation. If sulfonamides fail, a second course may be successful; hyperpyrexia or local therapy may be necessary.

Local treatment is indicated only in sulfonamide-resistant cases. When the infection is confined to the anterior urethra, not more than 6 cc. of a 5% solution of mild protein silver or 0.5% solution of strong protein silver is injected and retained for five minutes. If acute symptoms of posterior urethritis occur, all local treatment should be stopped and only hot sitz baths taken. When the second glass of urine has been clear and the first glass nearly so for two weeks, extremely gentle prostatic massage should be tried and repeated every three to four days, the secretions being examined every two weeks. If massage is painful or causes recurrence of symptoms, it should be discontinued for one week, or until symptoms subside, since continued massage will induce complications and retard cure. In the female, local treatment is usually unnecessary and frequently harmful. Acute salpingitis and Bartholin's gland infections should be treated in the hospital. Preg-

nancy does not contraindicate treatment with sulfathiazole.

Vaginitis of immature girls is usually not due to gonorrheal infection and positive culture is mandatory for diagnosis. Isolation, while the discharge is profuse, no local treatment, and administration of sulfathiazole for seven days, in daily doses of $\frac{1}{2}$ gr. per pound of body weight—not exceeding 30 gr. per day if the weight is less than 75 pounds—are adequate. — Prepared by a Special Committee of the American Neisserian Medical Society, Sept. 1943.



The Public's Foot

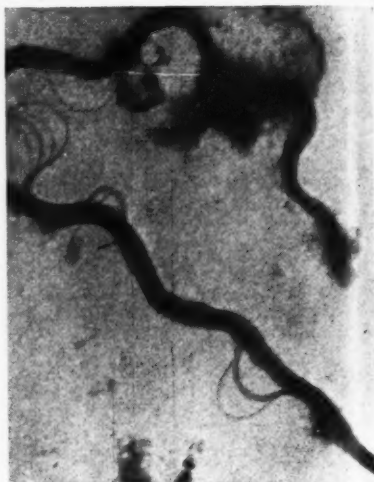
Structurally and functionally the foot is an amazing mechanism, it is not yet completely adapted to the erect posture. Nor is the bony skeleton of one person's feet so exactly like another's or the amount and distribution of downward pressure so much the same that, proper width and breadth assured, the ordinary stock shoes are suitable for all people.

The net result of these various contributing factors is foot trouble for a large proportion of the public, just what proportion it is hard to say. No hard, cold, reliable data are available on this point, but common observation indicates that more than a majority of adults have one or another kind of foot pain, weakness, or impairment.

It must be confessed that there are few places to which the foot sufferer may turn with any assurance of relief. Foot troubles do not kill, nor are they as a rule completely disabling, and the medical profession and public health workers are not inclined to give much thought to a disability which does neither of these things. Apparently the subject is beneath the notice of the high-powered orthopedist, and he will have none of it. Give him something that involves fractures, stiff joints, deformities, plaster casts, and the adjustments of muscles, and he is your man; but go to the same orthopedist with nothing more serious, from his standpoint, than a callus, and he is not likely to be interested, and not assuredly competent. The average physician, for his part, lacks fundamental knowledge as to the complicated functional anatomy of the foot. He is not, therefore, in position to bring relief to the patient, and ends up by referring her or him to a shoe store or a chiropodist. This is not to suggest that physicians undertake the routine trimming of toenails or the cutting of corns, but it does seem worth emphasizing that pedal disabilities constitute a vast prob-

lem and a correspondingly vast demand for relief, and that since the medical profession is not meeting this demand, these sufferers are seeking aid and comfort in other directions. They thus create public support and, in some instances, legislative backing of those who, from the medical standpoint, must be regarded as irregulars and subprofessional, and therefore not a group to be encouraged, and, more important from the sufferer's standpoint, he gets only temporary relief, as a rule.

In spite of all these things, a few physicians have undertaken serious study of the comparative anatomy of the foot, of its evolution, its mechanics, of pull of gravity on and through the foot. As nearly as can be gathered, these men have established relatively simple diagnostic procedures and quite effective therapy. Apparently, however, their pleas that the medical profession adopt a different attitude in regard to foot troubles, that it inform itself, and that it exercise modern diagnosis and therapy have fallen on deaf ears. And the suggestion that foot troubles constitute a public health problem is likely to strike horror in the hearts of the virus worker, the nutritionist, the administrator, the epidemiologist, unless they happen themselves to have some personal experiences along this line. Let it not be forgotten that the high incidence of a minor and lowly disability may constitute a more serious public health problem than does some aristocratic but comparatively rare disease. — Editorial in *American Journal of Public Health*.



The Spirochete

This is an electron microscope photograph of the *Spirocheta pallida*, the etiologic agent of syphilis, which has been magnified approximately 57,000 times. Note the flagellae. Malcom H. Soule of the Hygienic Laboratory, University of Michigan, Ann Arbor, furnished this striking illustration.

Pneumonia: Summary of Differential Diagnosis

	Atypical Pneumonia	Lobar Pneumonia
Age	20-30	20-50
Incubation	10-14 days	3-5 Days
Preceding Status	Coryza	Coryza and laryngitis
Onset	Chilliness often persistent	Chill
Fever	102-103.5	103-105
Pulse	100-110	120-130
Respiration	20-30	30-40
Sputum	No Characteristic organism	Pneumococcus (75 types)
Leukocyte count	4,000-8,000	12,000-22,000
Signs	Few Rales; other signs minimal	Dullness, rales, bronchial breathing
X-ray	Small area of pneumonitis in one or more lobes	Entire lobe involved
Duration	5-10 days; prolonged in severe cases, 2-4 weeks	8-12 days untreated, 2-4 days treated
Complications	Effusion, recurrence of pneumonia	Effusion
Prognosis	Excellent; deaths $\frac{1}{2}$ -1%	2-55 in hospital cases
Therapy	Symptomatic; no response to sulfonamides or penicillin	Specific response to sulfonamides, serum and penicillin
Convalescence	Usually slow, usually with slow lung clearance	Usually prompt, unless effusion is purulent

Meningococcus Meningitis

In a series of 35 cases at the Buffalo Children's Hospital, the following symptoms were found:

Symptom or Sign	Percentage of Patients Showing Symptom
Fever	100 percent
Vomiting	95 percent
Stiff neck	95 percent
Petechiae	80 percent
Kernig sign	75 percent

Meningococcic meningitis is primarily a disease of infants and children. It should be suspected in undiagnosed febrile conditions in these age groups. Petechiae may appear first, and give very strong evidence in favor of the diagnosis. Stages:

- | | |
|--------------------------------------|---|
| (1) Nasopharyngitis and tonsillitis. | } Spontaneous cure may occur in first 2 stages. |
| (2) Septicemia (meningococcemia). | |
| (3) Meningitis. | |

The use of meningococcic serum with sulfathiazole does not reduce the mortality rate of 10 percent, but does tend to bring on serum reactions.

Sulfathiazole dosage: Three fourths grain per pound of body weight, for an infant up to 1½ years of age, which is given until the temperature is normal for 1 week, at which time the dose is dropped to ¼ grain per pound.

Blood and spinal fluid cultures should be taken. The blood culture may be positive when there are no organisms in the spinal fluid.

Dr. Bender's discussion: Patients recover quickly. There are few complications with sulfathiazole therapy.

A child with unexplained fever should have a spinal puncture.

Infants do not develop intracranial symptoms as the fontanelle acts as a safety valve.

The lumbar puncture should be diagnostic only, unless increased pressure is present.

Dr. Hauenstein's discussion: A rash may be the only sign of meningococcemia. The "spotted fever" of petechiae may resemble fleabites. If petechiae are cut and squeezed on a slide, one may find meningococci (or one can find it in slides of tissue).

Dr. Witebsky: Four percent of meningococci are sulfa-resistant.

*From a paper given by Dr. Ferdinand Haase, Jr. before the staffs of the Buffalo General Hospital and Children's Hospital, Buffalo, New York, Feb. 28, 1944.

Bronchoscopy in Atelectasis of the New Born

Dr. Neuburger presented a paper before the Buffalo General and Children's Hospital Staff on January 31, 1944 on bronchoscopic aspiration for lung collapse of the newborn.

Indication: Only indicated if other therapy has failed and massive atelectasis has persisted.

The aspiration of mucus may be life saving. The etiology of atelectasis: (1) cerebral hemorrhage, (2) prematurity, (3) malformation, (4) fistula and (5) congenital anomaly may be contributory factors.

Discussion by Dr. Bozer: *If the baby does not become pink on oxygen treatment, bronchoscopy is useless.*

Bronchoscopy is easy in adults, difficult in the newborn because of small larynx and vocal cords which block one-half of the available space. Trauma to the larynx results in edema and obstruction. The newborn is a poor risk and a slight struggle may kill.

An x-ray should be taken to determine the amount of atelectasis; if a mucous plug is there, bronchoscopic aspiration may be helpful. A respirator is needed as the patient may stop breathing on the table.

Discussion by Dr. Arnold: *Every newborn baby is atelectatic for one to four days (Willson and Farber in American Journal of Diseases of Children, 1938).* Atelectasis does not cause death primarily except in premature babies who don't open up lungs for 5 weeks.

Etiology: The respiratory center in the medulla may be affected by hemorrhage, anoxemia or immaturity. The poorly developed thorax of the premature may give way. Pneumonia in the newborn is not uncommon; if of the virus type, may cause cyanosis. Hemorrhagic disease of the newborn may result in exsanguinating hemorrhage into the pleural cavity, which should be treated by removing the blood and giving of transfusions. Congenital heart disease should also be considered.

A mucous plug as the only cause of atelectasis is uncommon; its incidence may be only fifteen percent.

Editorial comment: Bronchoscopy and a spiration of mucous in the newborn is a difficult technical procedure needed very rarely and should only be performed by a very skilled bronchoscopist. An oxygen tank should be available in either home or hospital for use, after aspiration of mucous from the baby's

pharynx with a soft rubber catheter. The oxygen can be given by using a rubber nipple attached to the end of the rubber tube from the oxygen tank (see method described previous in *Clinical Medicine* Oct. 1943, p. 264) or by putting the baby in an open box and letting the oxygen run into the bottom of the box.

Modern Treatment of Jaw Fractures

Fractures of the jaws have long been a problem to surgeons, because of difficulty in immobilizing the fragments and in feeding the patients after the jaws have been fixed together. In Navy practice, fixation of the jaws may result to the patient strangling on his own vomitus during sea sickness.

For these reasons, there has been a wave of enthusiasm for external fixation of the fractured jaw with splint, pins, or wiring.

Lt. Cmdr. Straatsma, plastic surgeon at the Brooklyn Navy Yard, Brooklyn, reported,* "We had a series of 170 cases of fractured jaws that we have been following. We used the Stader spint on four, just experimentally, and for the rest of them we have come back to the ordinary arch wires and ordinary wiring. We clean them up, of course, at first, then put on the arch wires and wire fixation, feed them liquids, and they swallow pretty well, using the mouth route.

"We have had no case of osteomyelitis in this series of 170 cases of all types, compound and others. We give them all sulfathiazole routinely for four or five days until the blood level shows a sufficient amount of sulfathiazole. We have had no complications whatsoever, going back to the old fashioned way of taking care of fractured jaws."

At the meeting of Military Surgeons of the United States, Oct. 22, 1943, Dr. George Dorrance stated that he did not think pin appliances should be put on to fractured jaws, if the patients had good teeth in their mouth, so that the teeth themselves could be used as a splint. Also, that a nasal tube should be used for feeding.

[Why is this mentioned in CLINICAL MEDICINE? Most of us will never wire fractured jaws (although in an emergency, it is not difficult to bind the teeth together) but we should know the best advice to give our patients. Ed.]

* Clinics: Symposium on War Medicine. Philadelphia: J. B. Lippincott Co. Feb. 1944.

Gastric Hemorrhage Treated With Many Transfusions

The treatment of severe or persistent bleeding from the stomach or duodenum is not to give one or two transfusions of the traditional 500 cc. and then to consider that all has been done that is needed.

If severe shock is present, 500 cc. should be given every ½ hour until clinical improvement, paralleled by a rise in systolic blood pressure to 100 mm. or a restoration of a more normal pulse pressure occurs, following which the transfusion should be slowed down to 40 to 60 drops per minute.

Cases not showing the clinical phenomena of shock but with a hemoglobin below 60 percent should be transfused at a drip-rate throughout.

"Cases with clinical signs of shock were transfused rapidly to avoid the irreversible changes seen in tissues subjected to prolonged shock. . . When the subject is not in a clinical state of shock but is anemic as a result of the hemorrhage, transfusion is again indicated, not only for correction of the existing anemia but also as insurance against further hemorrhage, which may be of such a severity as would be well withstood by one with a relatively normal blood count but not by a debilitated anemic person. . . We recommend the transfusion of all cases with a hemoglobin of less than 60 percent." Only one patient died in a series of 30 cases of hemorrhage treated by M. Pappworth of London, England (*Lancet*, Oct. 16, 1943.)

Plasma Ineffective in Severe Hemorrhagic Shock

Too many surgeons feel that plasma and blood are equally effective for the treatment of shock and hemorrhage. In the treatment of shock not associated with severe hemorrhage, plasma injections provide for maintenance of blood pressure and blood volume very well.

Severe hemorrhage should not be treated with plasma alone, as the few remaining red blood cells will be diluted even further and sufficient oxygen to sustain life cannot be transported.

This statement has been proved by the work of McKee, et al., who showed that the injection of washed red cells was more effective than the injection of plasma in treating a series of dogs who had been bled very heavily.—S. G. & O., May 1944.

Appendicitis

In dealing with the syndrome of appendicitis, with reference especially to the absence of signs in the right iliac fossa. Pain in the abdomen is the outstanding symptom and action can be taken on the presence of pain alone. In the early stages there may be no other symptom or sign at all. There may be no vomiting and no rise in temperature or pulse rate. In the very early stage of appendicitis the main symptom is pain in the mid-line of the abdomen. An excellent rule to bear in mind is: "Acute pain in the mid-line of the abdomen, particularly when occurring in a young person, is due to acute appendicitis, unless it can be proved otherwise."

—C. CRAIG, M. D., in *Med. World (Lond.)* May 1944.

Frequency of Intercourse

The doctor is not infrequently asked as to how frequently sexual intercourse may be undertaken. Such a question will hardly be asked by happy and well-conditioned people; such persons do not look in works on dietics to find out how much they should eat, very properly considering appetite an adequate guide.—W. R. HOUSTON, M. D. in *"The Art of Treatment"* (MacMillan).

Nitroglycerin for Urticaria

Urticaria and angioneurotic edema (giant hives) are often relieved by nitroglycerin. 1/150 gr. is given orally, dissolved on the tongue, every 3 or 4 hours and the dose gradually increased until 1/50 gr. is taken every 4 hours. The patient should lay down for a short time after taking the medication.

Ephedrine for Enuresis

Facts accumulated after studying a series of boys with enuresis at the U. S. Maritime Service Training Station, Sheepshead Bay Brooklyn, would indicate that (1) ephedrine gr. $\frac{3}{4}$ given at bedtime is effective in preventing deep sleep, (2) waking at 1 and 4 a.m. to urinate is often effective in preventing bed wetting and (3) the boys and their parents are often of low intelligence, uncooperative and unhappy (divorce or separation is common.)

[The use of ephedrine is valuable because it not only prevents deep sleep but causes less powerful bladder contractions. This relaxing effect contraindicates use of ephedrine in older persons with bladder obstruction or enlarged prostates.—Ed.]

Is a Heart Normal?

A number of cardiologists were asked how the general physician could tell if a heart was normal. N. C. Gilbert, Professor of Medicine, Northwestern University School of Medicine, Chicago, answered:

"There is really only one point that is of value, and that is the size of the heart."

"The heart which is normal in size is not likely to have any pathologic lesions. Sometimes after rheumatic fever, the heart size remains normal, but usually the right ventricle and the left auricle are enlarged (shown on the roentgenogram)."

"If there is a history of rheumatic fever, I would always be careful about any heart. There may be no damage present, but rheumatic fever is always likely to recur and do further damage."

"I think Dr. MacKenzie's little dictum is a good thing to tell doctors, that a systolic murmur is never of any significance in a normal sized heart."

Dehydration Due to Forcing Fluids Preoperatively

Water is a good diuretic, unless sodium chloride is given with it so the water will be retained in the body. The patient who drinks much water preoperatively is really dehydrating himself. Dr. Koepf of the metabolic department of Buffalo General Hospital presented a series of graphs before the staff meeting, Jan. 31, 1944 proving these points. The loss of water may be prevented by giving the patient salt tablets (enteric coated to avoid nausea) in dosage of 10 to 15 Gm. to take with the water.

Dr. P. S. Hubbard commented that glucose and distilled water are also dehydrating.

Dr. J. S. Regan stated that such observations applied to normal patients. If too much salt is given, edema results, especially if the blood proteins are low, during the postoperative period.

Edematous patients may be dehydrated; (don't decrease plain water in edematous patients, especially in edema of pregnancy and toxemia).

If water is given too fast to eliminate, the patient becomes water logged ("water intoxication" of Rowntree).

[Edematous patients may be treated by water given by mouth and injections of Salyrgan intravenously. The injection of plasma increases the blood proteins and tends to withdraw water from the tissues.—Ed.]

Differential Diagnosis of Chicken Pox and Smallpox

The entire clinical picture must be considered in differentiating smallpox from chicken pox; no single feature is reliable. Laboratory tests for chicken pox are accurate but impractical. Typically, the lesions of chicken pox are multilocular, surrounded by a marked corona, and irregular in shape. They appear within 2-3 hours of the onset of illness, reach a climax on the second day, and continue to appear even to the fifth day. They may seem confluent. The distribution tends to be centripetal; many lesions appear in the axillae. Prodromal symptoms are absent or slight. The course is rapid; the fever reaches a climax on the second day and subsides usually on 48 hours.

In smallpox the lesions are multicellular but are nearly circular and lack the corona. They appear after 3-7 days, first on the face, although tending to appear together. They remain 4-6 days, become scabs, and usually leave scars. They are usually confluent. Distribution tends to be centrifugal; lesions are rare in the axillae. The temperature curve is usually diphasic and protracted. There is usually a drop with the onset of the eruption but fever may even be absent in mild forms.—C. WESSELHOEFF, M. D., in *New Eng. J. Med.*, Jan., Jan. 6, 1944.

Complication of Amebiasis

Amebiasis deserves far greater attention than is usually given: It is much more common than is generally believed, studies showing infection rates of from less than 1% to more than 50% in different localities in the U. S. as well as throughout the world. It may be mild, serious or disabling, or as a result of its complications, fatal. The incidence of dangerous complications is roughly proportional to its chronicity. It is amenable to treatment and usually can be cured by modern methods of therapy.

It should be considered in the differential diagnosis of all intestinal, especially colonic, disturbances. Final diagnosis depends upon finding *Entamoeba histolytica* in the stools, a process requiring skill, patience and persistence.

The complications to be considered are: 1. Very extensive ulceration of the colon. 2. Peritonitis, with or without perforation of the large intestine. 3. Perforation into retro-peritoneal tissue. 4. Perforation with formation of fistula. 5. Amebic abscess of the liver. 6. Perforation of the diaphragm. 7. Involvement of pleura with or without perforation of the diaphragm. 8. Abscess of the lung. 9. Abscess of the brain. 10. Other rare complications. 11. Other associated but not related diseases.—J. P. SIMONDS, M. D., in *Northwestern Univ. Quart. Bull.*, July 1944.

Hypertension

TYPES OF HYPERTENSION

	Systolic Hypertension	Diastolic Hypertension
Systolic blood pressure	Elevated	Elevated
Diastolic blood pressure	Normal or low	Elevated
Cause	Aortic insufficiency Goiter Aortic sclerosis with heart block, slow rate	Diffuse glomerulonephritis. Polycystic kidney disease. Pyelonephritic contracted kidneys, essential hypertension; adrenal, pituitary tumors; hypertensive disease of pregnancy.
Clinical Importance	Of little clinical importance	Great clinical importance

The exact level of blood pressure is not an index of the severity of the disease. Treatment directed solely toward reduction of the level of blood pressure neglects the primary cause. Wide variations in blood pressure, extending from very high elevations to normal, occur not only from month to month but from minute to minute. While the hypertensive process is going on, the blood pressure may be in the normal range for months.—W. GOLDRING, M.D. and H. CHASIS, M.D. in *"Hypertension and Hypertensive Disease"* (The Commonwealth Fund).



THUMB NAIL

THERAPEUTICS

Local Anesthesia for Sprains

• The injection of an anesthetic solution directly into the most tender area soon after sprains or injuries (not accompanied by open wounds) reduces the pain, permits prompt mobilization, and enables the injured individual to remain active. In the common sprain, the injury is characterized by partial rupture of ligaments and small blood vessels with the formation of a hematoma, which is usually composed of more tissue fluid than actual blood. The tension exerted by this fluid within a confined space probably produces most of the pain and loss of function. The ensuing stiffness is due, in part, to this fluid accumulation and, in part, to the disuse caused by the pain on motion, a 2% procaine hydrochloride solution injection into the most tender area relieves the pain at once.—**LEUT. (JG) IRVING LEINWAND, M. C., Military Surgeon, January, 1943.**

Sulfathiazole for Epidemic Keratoconjunctivitis

• In sodium sulfathiazole desoxyephedrine, we have a new medication that is harmless to the ocular tissues. It appears to be of great value in epidemic keratoconjunctivitis and reduces the time of the acute conjunctival aspect to three to seven days. It does not seem to prevent the appearance of corneal infiltrates, but we have the impression that when infiltrates do appear they are less numerous and less severe than in untreated cases. The subjective discomforts of epidemic keratoconjunctivitis disappear under this treatment with amazing rapidity.—**H. A. GRADLE, M. D. in E. E. N. T. M., Sept. 1943.**

Plasma Intraperitoneally in Infantile Enteritis

• Rapid improvement in infants with acute gastroenteritis usually followed 1 or more intraperitoneal injections of 75-150 cc. blood plasma.—**V. T. CURTIN, M. D., in Pennsylvania M. J., Mar. 1944.**

Vitamin A for Chronic Nasal Discharge

• The local application of Vitamin A is of benefit for children with nasal catarrh. Five drops are instilled three times a day in each nostril. The treatment is of special value for children who always have colds. Allergic rhinitis is not benefited nor is chronic tonsillitis.—**Archivos Argentinos de Pediatria, April, 1943.**

Ammonium Chloride Ineffective

• Under controlled clinical studies, ammonium chloride has no efficacy as a diuretic nor does it enhance the action of a mercurial diuretic used later.—**I. VOLINI, M.D., in Ill. S. M. J., Aug. 1943.**

Vitamin C Therapy of Agranulocytosis

• Agranulocytosis (marked decrease in number of polymorphonuclear white blood cells) may be cured by the administration of large doses of vitamin C. Two thousand mg. of ascorbic acid should be given daily, plus 90 grains of ferrous iron.—**J. DRUMMOND, M.D., in Proc. Cape Town Postgrad. Med. Assoc., Aug. 1943.**

Plasma Treatment of Mumps Orchitis

• The injection of 250 cc. (one unit) of pooled blood plasma often causes marked improvement in orchitis complicating mumps. It is recommended for use when convalescent serum is not available.—**A. C. RAMBAR, M. D., in U. S. Naval Med. Bull. Apr. 1944.**

Orbital Abscess

• Sulfadiazine, sulfapyridine or sulfathiazole is used. The initial oral dose for adults is 2 to 5 Gm., which is followed by 1 Gm. every four hours around the clock. For children, the doses are reduced proportionately. Other measures, such as the use of hot wet dressings and drainage, must be considered.—**PARKER HEATH, M.D., in J.A.M.A. Jan. 15, 1944.**

Thyroid Extract

• Treatment with thyroid extract orally is indicated in women who have such symptoms of hypothyroidism as constipation, lethargy, dry skin and hair. It is often effective in the control of profuse menstruation and in re-establishing menstruation. It may be of value in sterility.—J. P. GREENHILL, M. D., in *Med. Clin. N. Am.*, June 1943.

Blepharitis

• Blepharitis and that form of punctate keratitis associated with chronic conjunctivitis (usually caused by a staphylococcus) are sometimes cured by using sulfadiazine or sulfathiazole ointment three to six times a day. Tyrothricin is helpful (20 mg. per hundred cubic centimeters). The compound neosynephine sulfathiazolate 3.0 per cent has relieved some obstinate cases.—PARKER HEATH, M.D., in *J.A.M.A.*, Jan. 15, 1944

Procaine Injection for Herpes Zoster

• Persistent herpes zoster may be treated by paravertebral procaine block with prompt cessation of pain and remarkable clearing up of the skin lesions.—T. FINDLEY, M. D. at Charity Hospital (New Orleans) Staff Meeting, Apr. 18, 1944.

Radium for Children's Deafness

• Many cases of deafness in children are caused by enlargement of lymphoid tissue in the Eustachian tube. This may be shrunken by radium treatment.—P. M. PASTORE, M. D., in *Proc. Mayo Clinic*, Aug. 23, 1943.

Sulfaguanidine for Flexner Dysentery

• The administration of 40 Gm. of sulfaguanidine cures almost all cases of Flexner dysentery. Toxic skin reactions are very rare. Such patients should be given 150 mg. of ascorbic acid (synthetic vitamin C) daily until he can ingest an adequate diet.—*Brit. Med. J.*, Mar. 25, 1944.

Hydrochloric Acid as a Tonic

• Dilute hydrochloric acid (in doses of one half to one teaspoonful with meals) administration results in increased appetite and a sense of well being in many persons.—F. L. APPERLY, M.D., in *Va. Med. M.*, Nov. 1943.

Black Widow Spider Bite

• The intravenous injection of calcium chloride (10 cc. of a 10% solution) gives immediate relief to patients suffering severe abdominal pain from black widow spider bites. The moment the flushing from the calcium chloride begins, usually after one minute, the relief of the painful cramps is instantaneous. The board-like rigidity of the abdomen disappears and the musculature becomes flaccid, even before the injection is completed. It can be repeated at intervals of one or two hours, for four or five doses and then once or twice daily as needed.—BERT L. HALTER, M. D., in *Mil. Surg.*, Nov., 1943.

Surgical Treatment of Tophaceous Gout

• Tophi (urate crystals) which are deposited near joints in patients with gout may be removed surgically. Much improvement in joint function and relief of pain follows.—ROBERT R. LINGTON, M.D. and JOHN TALBOTT, M.D., in *Ann. Surg.*, Feb. 1943.

Episcleritis

• Hot fomentations, either of clear hot water, or 15 per cent solution of boric acid, and instillations of 1 per cent atropine. To the atropine may be added, with advantage, 5 grains to the ounce of dionin, which acts as a lymphagogue and brings about resorption of the inflammatory products.—E. E. N. T. M., Sept. 1943.

Promizole in Tuberculous and Pulmonary Meningitis

• Promizole (4,21-diaminophenyl-51, thiazolesulfone) administration apparently cured a case of tuberculous meningitis. Clinical studies of 56 patients with tuberculosis of the lung indicate that, in the future, the tubercle bacillus may be amenable to a chemotherapeutic approach. (Parke, Davis and Company).—H. C. HINSHAW, M.D., in *Proc. Staff Meet. Mayo Clinic*, Jan. 26, 1944

Inclusion Blennorrhoea

• Sulfathiazole is used. The oral dosage is one-third grain (0.022 Gm.) per pound daily in divided doses. This dosage is discontinued after the fourth to seventh day. Local treatment consists of antiseptic washes and the use of 5 per cent sulfathiazole ointment at night.—PARKER HEATH, M.D., in *J.A.M.A.*, Jan. 15, 1944

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to **CLINICAL MEDICINE**, Waukegan, Ill., is accompanied by a check for the published price of the book.

DISCOVERING OURSELVES

DISCOVERING OURSELVES: A View of the Human Mind and How it Works. By Edward A. Strecker, M. D., Sc. D., and Kenneth E. Appel, M. D., Sc. D. In collaboration with John W. Appel, M. D. of the Department of Psychiatry, University of Pennsylvania. Second Edition. Published by The MacMillan Company, New York, N. Y. 1944. Price \$3.00.

For the physician who wants to understand the workings of the mind, his own and his patients, this book can be recommended. It can be prescribed for the intelligent patient, and will be of real help in explaining his emotional problems.

The language is non-technical, the presentation complete, and many instances are given of actual cases. This is 'dynamic psychology.'

A beautiful example of its method may be shown in this sample: "Clever and successful people have formed helpful habits of thinking and doing. Many people, inadequate emotionally or nervously upset, have not formed good habits of dealing with problems. Each difficulty is a fresh occasion for emotion and indecision instead of merely a transient situation that is easily mastered by good habits."

FERTILITY IN MEN

Hotchkiss

FERTILITY IN MEN: A Clinical Study of the Causes, Diagnosis and Treatment of Impaired Fertility in Men. By Robert Sherman Hotchkiss, B. S., M. D., Lieutenant Commander, M. C., U.S.N.R. (on active service); Assistant Professor of Urology, New York University Medical College; Published by J. B. Lippincott Company, Philadelphia, Pa. 1944. Price \$4.50.

A human, documented study of the various factors involved in male sterility, methods of recognition and treatment.

The author's consideration of the attitudes of husband and wife has much commonsense and clinical applicability.

A biopsy on the testis will avoid much surgery and prolonged treatment of the wife if certain lesions are revealed. The technique as an office procedure under local anesthesia is illustrated and described.

Full information is given on semen study. Factors influencing sterility, such as too frequent coitus, are brought out so that the physician can advise properly.

TEXTBOOK OF GYNECOLOGY

Novak

TEXTBOOK OF GYNECOLOGY. By Emil Novak, M.D., F.A.C.S., Associate in Gynecology, The Johns Hopkins Medical School; Gynecologist, Bon Secours and St. Agnes Hospitals, Baltimore. Published by The Williams and Wilkins Company, Baltimore, Md. 1944. Second Edition. Price, \$8.00.

Novak's text is a standard one in its field.

In its new edition, it combines in one text a clinical and pathologic survey of the entire field. The author's balance, his refusal to be hurried into untried methods of diagnosis and treatment, is everywhere apparent.

Problems of sex life are discussed briefly but to the point. His suggestion that the inhibited wife take an alcoholic drink before retiring to bed has much to recommend it. Endocrinology is presented well, together with cyclical changes in the genital tract.

Many pointers are given for the practicing physician and student on performing a vaginal examination to make sure that no lesions are missed.

The colored clinical photographs are of great teaching value. Black and white illustrations are also good.

The text is clear, well written, complete, authoritative.

INFANTS WITHOUT FAMILIES

Freud and Burlingham

INFANTS WITHOUT FAMILIES. By Anna Freud and D. T. Burlingham. Published by the International University Press, New York 11, N. Y. (227 West 13th Street). 1944. Price \$2.00.

This book describes observations made in institutional nurseries for pre-school children in England during the war years. Interesting descriptions are given on the reactions of children being reared in such an environment to the diverse phases of daily living. Development of conversation, play, social responses, attachment to the nurses, relationships to visiting parents, and growth of the sense of ethical responsibilities are all discussed. The major conclusion drawn is that institutions, no matter how understandingly run, may approach, but never replace, mother love as a foundation for the emotional stability of the child.

THE HOSPITAL IN MODERN SOCIETY

THE HOSPITAL IN MODERN SOCIETY. Edited by Arthur C. Bachmeyer, M. D. and Gerhard Hartman, Ph. D. Published by The Commonwealth Fund, New York, N. Y. 1943. Price \$5.00.

Here the alert hospital superintendent may find classical articles from the literature on every aspect of hospital management. Any superintendent who studies and applies all the knowledge contained in this compendium and has the experience which would enable him to use such information intelligently, should be well equipped.

The articles have been well selected, the printing and binding are good.—F.C.M.

SEGMENTAL NEURALGIA IN PAINFUL SYNDROMES

Judovich, Bates

SEGMENTAL NEURALGIA IN PAINFUL SYNDROMES. By Bernard Judovich, B. S., M. D., Instructor in Neurology, Graduate School of Medicine, University of Pennsylvania; Clinical Instructor in Neurology, Women's Medical College; Chief of Neurology Clinics, Philadelphia General Hospital, Graduate Hospital and Women's Medical College Hospital, Philadelphia; and William Bates, B. S., M. D., F. A. C. S., F. I. C. S., Professor of Surgery, Graduate School of Medicine, University of Pennsylvania; Consulting Surgeon, Babies Hospital and Philadelphia Home for Incurables; Consulting General Surgeon, Wills Hospital, Philadelphia. Foreword by J. C. Yuskis, M.D., Pro-

essor of Neurology, Graduate School of Medicine, University of Pennsylvania, Philadelphia, 178 illustrations. Published by F. A. Davis Company, Philadelphia, Pa. 1944. Price \$5.00.

Every physician who has been puzzled as to the best treatment for pain in muscles, joints, extremities and the back, should read this book.

The various causes, including short leg, are explained and simple methods of correction advised. Procaine injections (also ammonium sulfate and pitcher plant extract) are advised, and technic and rationale explained.

The patient with pain after appendectomy, "adhesions" and many other clinical problems are discussed. This book cannot be too strongly recommended for the thinking physician who wishes to help his patients.

MAN DOES NOT STAND ALONE

Morrison

MAN DOES NOT STAND ALONE. By A. Cressy Morrison. Published by Fleming H. Revell Company, New York, N. Y. 1944. Price \$1.25.

This is a well written book presenting in beautiful prose the lessons that science has learned. The complexity and interweaving of dramatic facts are emphasized in an imaginative way. Whether one believes, with the author, that a deity is proved by such facts, one must admit an awakening of consciousness of our world.

THE WOUNDED GET BACK

Maisel

THE WOUNDED GET BACK. By Albert Q. Maisel. Foreword by Ross T. McIntire, Rear Admiral, Medical Corps, U. S. Navy; The Surgeon General of the Navy. Published by Harcourt, Brace and Company (383 Madison Avenue), New York, N. Y. 1944. Price \$2.50.

This is the story of a writer who spent five months as a guest of the Navy in the South Pacific. He has written a honest story of what he saw of ills and injuries, and of the superlative care that the Navy medical corps gave to the men.

Unlike most such tales, the author himself learned of the essential facts about malaria, and its treatment, first care for injuries, modern methods of psychiatric care plus other modern methods, and endeavors to impart them to the reader. In other words, the book is scientifically accurate. By recital of actual cases, it remains interesting, however.

For the physician who has not kept up with war medicine and for his patients, this book is recommended. Your hardboiled reviewer found himself reading the whole thing one night while O. D. (Officer of the Day) and really sleepy.

Another thing—the physicians and surgeons are made to seem like human beings, as well as competent professional men. We could do with more descriptions of this type.

THE BUSINESS OF GETTING WELL

Sprague

THE BUSINESS OF GETTING WELL. By Marshall Sprague. Illustrated by Ervne Metzl. Published by Thomas Y. Crowell Company, New York, N. Y., (432 Fourth Avenue). 1944. Price, \$1.75.

When you tell the patient that he must go to bed for a number of weeks or months, prescribe the purchase of a copy of this book. The author, a competent writer, was told that he must undergo some months of hospitalization. This small volume is the result, the tale of nurses, orderlies, other patients, how to adjust to living in bed, how to rest and overcome the acute stage of illness.

It is clearly and humorously written. You will enjoy the chapter "Are Doctors Human?"

VIRUS DISEASES

Seifert

VIRUS DISEASES IN MAN, ANIMAL AND PLANT. By Gustav Seifert, A Survey and Reports Covering the Major Research Work Done During the Last Decade. Published by The Philosophical Library, New York, N. Y., 1944. Price \$5.00.

Those physicians who have been perplexed at the various forms of illness brought about by viruses will enjoy this small volume.

The author first explains what this current concept of a virus is, how they were first recognized and then proceeds to review the literature as to the disease processes (herpes, mumps, chicken pox, trachoma, smallpox, measles, scarlet fever, grippé or influenza, Hodgkin's disease, infantile paralysis, rabies, encephalitis, whooping cough, rickettsia, and diseases of animals and plants) which they cause.

Methods of virus investigation are summarized, and a brief survey given of natural and acquired immunity in virus diseases, protective inoculation in virus diseases, size and measurement of virus and so on.

The author has a gift for briefing and making readable information we should know, as witness: "Survival from a virus sickness creates the most lasting and strongest immunity. The natural protection a population gains by a far-reaching thorough attack of disease is in itself the best."

This is, apparently, the first attempt to bring together the present knowledge of vir. in convenient, easily readable, brief form (317 pages of text). It can be recommended to those wishing to bring their knowledge up to date.

THE MERCK INDEX

THE MERCK INDEX. An Encyclopedia for the Chemist, Pharmacist, Physician, Dentist and Veterinarian. Containing Useful Scientific Data and Other Information on the Physical, Chemical and Medicinal Properties as well as the Various Uses, of Chemicals and Drugs; Also, more than 4,500 Chemical, Clinico-chemical Reactions, Tests and Reagents; Formulas for Preparation of Culture Media, Fixatives and Staining Solutions; Useful Tables; Antidotes for Poisons; References to the Literature. Compiled and Published by Merck & Co., Inc., Rahway, New Jersey. Fifth Edition. 1941. Price \$3.00.

As indicated in the resume above, this volume contains a brief summary of thousands of drugs, listed under both their popular and proprietary names. Each chemical is described chemically, together with its properties, uses and indications if any in medical and veterinary practice, dosage and incompatibilities.

The volume is of handy size, despite its 1,062 pages, because it is printed on very thin paper. The type is large and clear so that there is no eye strain involved in referring to the book frequently. Merck and Company are to be congratulated on continuing this service, for 55 years.